

Vincerx Pharma, Inc.

Up to \$30,000,000 Common Stock

We have entered into a sales agreement, dated January 21, 2025 (the "Sales Agreement"), with H.C. Wainwright & Co., LLC ("Wainwright") relating to our common stock, \$0.0001 par value per share ("Common Stock"), offered by this prospectus and the accompanying prospectus. In accordance with the terms of the Sales Agreement, from time to time we may offer and sell our Common Stock having an aggregate gross sales price of up to \$30,000,000 through Wainwright, acting as sales agent or principal, pursuant to this prospectus supplement and the accompanying prospectus.

Our Common Stock is traded on the Nasdaq Capital Market under the symbol "VINC." On January 17, 2025, the last reported sale price of our Common Stock as reported on the Nasdaq Capital Market was \$0.1523 per share.

Sales of our Common Stock, if any, under this prospectus supplement and the accompanying prospectus may be made in sales deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended (the "Securities Act"), including sales made directly on or through the Nasdaq Capital Market, the existing trading market for our Common Stock, sales made to or through a market maker other than on an exchange or otherwise, directly to the agent as principal, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or in any other method permitted by law. Subject to terms of the Sales Agreement, Wainwright is not required to sell any specific number or dollar amount of our Common Stock but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Wainwright and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Wainwright will be entitled to a commission equal to 3.0% of the gross sales price per share sold under the Sales Agreement. In connection with the sale of our Common Stock on our behalf, Wainwright may be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Wainwright may be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contributions to Wainwright against certain civil liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended (the "Exchange Act"). See "Plan of Distribution" beginning on page S-18 for additional information regarding the compensation to be paid to Wainwright.

We are an "emerging growth company" and a "smaller reporting company" as defined under the federal securities laws and, as such, we have elected to comply with certain reduced reporting requirements for this prospectus supplement and may elect to do so in future filings.

Investing in our Common Stock involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "<u>Risk Factors</u>" beginning on page S-8 of this prospectus supplement, and under similar headings in the documents that are incorporated by reference into this prospectus supplement and the accompanying prospectus.

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

H.C. Wainwright & Co.

The date of this prospectus supplement is January 21, 2025

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PROSPECTUS

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus relate to an offering of our Common Stock. Before buying any of the shares of Common Stock that we are offering, we urge you to carefully read this prospectus supplement and the accompanying prospectus, together with the information incorporated by reference herein and therein as described under the heading "Where You Can Find More Information" in this prospectus supplement. These documents contain important information that you should consider when making your investment decision. Unless the context otherwise requires, references to "Vincerx Pharma," "Vincerx," "we," "us," "our," "our Company," "the Company" and "our business" refer to Vincerx Pharma, Inc. (f/k/a Vincera Pharma, Inc. f/k/a LifeSci Acquisition Corp.) and its consolidated subsidiaries.

This prospectus supplement describes the terms of this offering of shares of Common Stock and also adds to and updates information contained in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. Generally, when we refer to this prospectus, we are referring to both this prospectus supplement and the accompanying prospectus. To the extent the information contained in this prospectus supplement differs from or conflicts with the information contained in the accompanying prospectus or any document incorporated by reference herein or therein, the information in this prospectus supplement will control. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference into this prospectus supplement and the accompanying prospectus. The statement in the document having the later date modifies or supersedes the earlier statement.

We have not, and Wainwright has not, authorized anyone to provide you with information different from that which is contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we may authorize for use in connection with this offering. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give to you. No one is making offers to sell or seeking offers to buy shares of our Common Stock in any jurisdiction where the offer or sale is not permitted. You should assume that the information contained in this prospectus supplement is accurate as of the date on the front cover of this prospectus supplement only and that any information we have incorporated by reference or included in the accompanying prospectus is accurate only as of the date given in the document incorporated by reference or as of the date of the prospectus, as applicable, regardless of the time of delivery of this prospectus supplement, the accompanying prospectus, any related free writing prospectus, or any sale of our Common Stock. Our business, financial condition, results of operations and prospects may have changed since those dates.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference into this prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus supplement, the accompanying prospectus and the information incorporated herein and therein by reference include trademarks, servicemarks and tradenames owned by us or other companies. All trademarks, servicemarks and tradenames included or incorporated by reference in this prospectus supplement or the accompanying prospectus are the property of their respective owners.

FREQUENTLY USED TERMS

Unless the context indicates otherwise, references in this prospectus to the "Company," "Vincerx," "we," "us," "our" and similar terms refer to Vincerx Pharma, Inc. (f/k/a Vincera Pharma, Inc. f/k/a LifeSci Acquisition Corp.) and its consolidated subsidiaries. References to "LSAC" refer to our predecessor company prior to the consummation of the Business Combination.

- "2020 Incentive Plan" means the Vincerx Pharma, Inc. 2020 Stock Incentive Plan.
- "Bayer License Agreement" means that certain License Agreement, dated October 7, 2020, by and among Vincera Pharma, Bayer Aktiengesellschaft and Bayer Intellectual Property GmbH.
- "Business Combination" means the Merger and the other transactions described in the Merger Agreement.
- "Earnout Shares" means certain rights to our Common Stock after the closing of the Business Combination that Legacy Vincera Pharma stockholders may be entitled to receive pursuant to the Merger Agreement.
- "Exchange Act" means the Securities Exchange Act of 1934, as amended.
- "IRS" means the Internal Revenue Service.
- "JOBS Act" means the Jumpstart Our Business Startups Act of 2012.
- "LSAC" means LifeSci Acquisition Corp., our predecessor company.
- "Legacy Vincera Pharma" means Vincera Pharma, Inc. prior to the closing of the Business Combination, which changed its name to VNRX Corp. following the Business Combination.
- "Legacy Vincera Pharma stockholders" means the stockholders of Legacy Vincera Pharma immediately prior to the Business Combination.
- "Merger" means the merger of Merger Sub with and into Legacy Vincera Pharma, with Legacy Vincera Pharma surviving as the surviving company and as a wholly-owned subsidiary of LSAC, which occurred on December 23, 2020.
- "Merger Agreement" means that certain Merger Agreement, dated September 25, 2020, by and among LSAC, Merger Sub, Legacy Vincera Pharma and Raquel E. Izumi, as the representative of the stockholders of Legacy Vincera Pharma.
- "Merger Sub" means LifeSci Acquisition Merger Sub, Inc., a Delaware corporation and wholly-owned subsidiary of LSAC.
- "private warrants" means the warrants issued simultaneously with the closing of the initial public offering of LSAC in a private placement to LifeSci Holdings LLC and Rosedale Park, LLC and the warrants issued pursuant to Section 8.6 of the Merger Agreement.
- "SEC" means the U.S. Securities and Exchange Commission.
- "Securities Act" means the Securities Act of 1933, as amended.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights certain information about us and this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement and the accompanying prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our Common Stock. For a more complete understanding of our company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference into this prospectus supplement and the accompanying prospectus, and the information included in any free writing prospectus that we authorize for use in connection with this offering, including the information contained in and incorporated by reference under the heading "Risk Factors" beginning on page S-8 of this prospectus supplement, and under similar headings in the other documents that are filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.

Company Overview

We are a clinical-stage biopharmaceutical company focused on leveraging our extensive development and oncology expertise to advance new therapies intended to address unmet medical needs for the treatment of cancer. Our current pipeline is entirely derived from the Bayer License Agreement, pursuant to which we have been granted an exclusive, royalty-bearing, worldwide license under certain Bayer patents and know-how to develop, use, manufacture, commercialize, sublicense, and distribute (i) a bioconjugation platform, which includes next-generation antibody-drug conjugates and small molecule-drug conjugates, and (ii) a small molecule drug program, including a P-TEFb inhibitor compound. We intend to use these product candidates to treat various cancers in a patient-specific, targeted approach. We believe that these product candidates are differentiated from current programs targeting similar cancer biology and, if approved, may improve clinical outcomes of patients with cancer.

Recent Developments

We had cash on hand of approximately \$2.4 million as of January 9, 2025.

Binding Term Sheet

We have entered into a binding term sheet (the "Term Sheet") with Oqory, Inc., a Delaware corporation ("Oqory"), and Vivasor, Inc., Oqory's parent corporation, relating to a proposed business combination between Vincerx and Oqory. Oqory is a private biopharmaceutical company dedicated to developing next-generation antibody-drug conjugates for the treatment of cancer, focused on the development of Oqory's lead clinical asset, OQY-3258. OQY-3258 is an anti-TROP2 ADC with an optimized enzyme-dependent linker technology and an SN-38 payload with established efficacy and manageable side effect profile. OQY-3258 has completed Phase 1/2 development in China, treating over 150 patients with solid tumors, including metastatic HR+/HER2- and triple-negative breast cancer. Currently, OQY-3258 is being evaluated in China in a Phase 3 study as first-line treatment in patients with unresectable recurrent or metastatic triple-negative breast cancer and in a Phase 3 study in patients with unresectable locally advanced or metastatic HR+/HER2- breast cancer. The parties currently contemplate a reverse triangular merger structure, pursuant to which (i) a subsidiary of Vincerx would merge into Oqory, (ii) Oqory stockholders would receive shares of Common Stock in exchange for their shares of Oqory common stock ("Oqory Common Stock") based on the Exchange Ratio (as defined below), and (iii) outstanding options, warrants, and other rights to acquire Oqory Common Stock ("Oqory Stock Rights") would be assumed by Vincerx and converted into options, warrants, and rights to acquire Common Stock based on the Exchange Ratio.

The conversion of the Oqory Common Stock and Oqory Stock Rights would be pursuant to an exchange ratio (the "Exchange Ratio") to be determined based on the following aggregate intended post-closing percentage ownership: (i) the equity holders of Oqory immediately prior to the closing (including all Oqory Stock Rights) would own 95% of the equity of the combined company, and (ii) the equity holders of Vincerx (including all outstanding options and warrants) would own 5% of the equity of the combined company, in each case without taking into account the Concurrent Investment (as defined below) and the post-closing equity pool described below. In the event that the fully-diluted value of Common Stock held by existing Vincerx stockholders in the combined company upon the closing is less than \$13.66 million, Oqory stockholders will forfeit their shares through an adjustment to the Exchange Ratio.

The business combination contemplates an offering of equity interests in Vincerx that would be completed concurrent with the closing of the business combination (the "Concurrent Investment") pursuant to binding securities purchase agreements that would be entered into at the time the parties execute a definitive business combination agreement. The Concurrent Investment is intended to be in an amount equal to at least \$20 million, subject to increase with the written agreement of the parties. Pursuant to the Term Sheet, investors determined by Oqory are required to provide \$1,500,000 in interim financing to Vincerx through the purchase of equity, of which \$1,000,000 has been previously purchased and \$500,000 is to be purchased on or before January 31, 2025.

Following the closing, the combined company's board of directors would consist of nine members, of which Vincerx's key stockholders would be entitled to nominate two members, Oqory's key stockholders would be entitled to nominate two members, and all other members would be independent directors nominated by Oqory in consultation with the other directors of the combined company. The board of directors of the combined company will determine the officers and other personnel of the combined company.

The parties intend to negotiate a definitive business combination agreement that will incorporate the provisions of the Term Sheet, as well as other terms and conditions typical for transactions of this nature. During the period from effectiveness of the Term Sheet until the earlier of execution of such a definitive agreement or January 31, 2025, the parties have agreed not to solicit or encourage submission of, or participate in discussions or enter into any agreement regarding, any other acquisition proposal.

Conditions to enter into a definitive business combination agreement include satisfactory completion of due diligence by the parties, commitments by investors for the Concurrent Investment, voting support agreements by Vincerx's officers and directors, and approval by the boards of directors of the parties. Vincerx's due diligence has not been completed as of the date hereof. Conditions to the closing of the business combination include approval by the stockholders of the parties, governmental, regulatory, and other third-party approvals, and closing of the Concurrent Investment.

Background

Our company was originally known as LifeSci Acquisition Corp. On December 23, 2020, LSAC consummated the Business Combination with Legacy Vincera Pharma pursuant to the Merger Agreement. In connection with the closing of the Business Combination, LSAC changed its name to Vincera Pharma, Inc. and subsequently to Vincerx Pharma, Inc. Immediately prior to the effective time of the Merger, each share of Legacy Vincera Pharma common stock was canceled, and the Legacy Vincera Pharma stockholders received (i) 0.570895 of a share of our Common Stock, for each share of Legacy Vincera Pharma common stock held by them immediately prior to the effective time of the Merger and (ii) certain rights to Earnout Shares after the closing of the Business Combination. The Legacy Vincera Pharma stockholders are entitled to receive Earnout Shares if the daily volume-weighted average price of our Common Stock equals or exceeds certain specified prices for any 20 trading days within any 30 trading-day period following the closing of the Business Combination, as provided in the Merger Agreement. A total of 90.6% (rounded to the nearest whole share) of the Earnout Shares then earned and issuable shall be issued to the Legacy Vincera Pharma stockholders on a pro-rata

basis based on the percentage of the number of shares of Legacy Vincera Pharma common stock owned by them immediately prior to the closing of the Business Combination, and the remaining Earnout Shares that would otherwise have been issuable shall not be issuable to the Legacy Vincera Pharma stockholders but in lieu thereof the number of authorized shares available for issuance under our 2020 Incentive Plan shall be automatically increased by an equivalent number of shares of our Common Stock.

Our Common Stock is listed on the Nasdaq Capital Market under the symbol "VINC."

Corporate Information

LSAC was incorporated in the State of Delaware in December 2018 as a special purpose acquisition company. In December 2020, its whollyowned subsidiary merged with and into Legacy Vincera Pharma, with Legacy Vincera Pharma surviving the merger as a wholly-owned subsidiary of LSAC and changing its name to VNRX Corp. In connection with the Business Combination, we changed our name to Vincera Pharma, Inc., and subsequently to Vincerx Pharma, Inc. Our principal executive offices are located at 1825 S. Grant Street, San Mateo, California 94402. Our telephone number is (650) 800-6676. Our website address is www.vincerx.com. Information contained on our website or connected thereto does not constitute part of, and is not incorporated by reference into, this prospectus supplement, the accompanying prospectus or the registration statement of which it forms a part.

Emerging Growth Company and Smaller Reporting Company

We are an emerging growth company, as defined in Section 2(a) of the Securities Act, as modified by the JOBS Act. As such, we are eligible to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a non-binding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. If some investors find our securities less attractive as a result, there may be a less active trading market for our securities and the prices of our securities may be more volatile.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We intend to take advantage of the benefits of this extended transition period.

We will cease to be an emerging growth company on the date that is the earliest of (a) the last day of the fiscal year in which we have total annual gross revenue of \$1.235 billion or more, (b) December 31, 2025, the last day of our fiscal year following the fifth anniversary of the date of the completion of our initial public offering, (c) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years, or (d) the date on which we are deemed to be a large accelerated filer under the rules of the SEC.

Additionally, we are a smaller reporting company as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (1) the market value of our shares of Common Stock held by non-affiliates exceeds \$250 million as of the prior June 30, or (2) our annual revenues exceeded \$100 million during such completed fiscal year and the market value of our shares of Common Stock held by non-affiliates exceeds \$700 million as of the prior June 30.

THE OFFERING		
	Common Stock offered by us	Our Common Stock having an aggregate offering price of up to \$30,000,000.
	Common Stock to be outstanding after the offering	Up to 228,375,548 shares, based on the number of shares of Common Stock outstanding as of September 30, 2024 and assuming sales of 196,979,645 shares of Common Stock in this offering at an assumed offering price of \$0.1523 per share, which was the last reported sale price of our Common Stock on the Nasdaq Capital Market on January 17, 2025. The actual number of shares issued will vary depending on the sales prices at which our shares of Common Stock are sold under this offering.
	Plan of Distribution	"At the market offering" that may be made from time to time through our sales agent, Wainwright. See "Plan of Distribution" on page S-18 of this prospectus supplement.
	Use of Proceeds	We currently intend to use the net proceeds, if any, from this offering for working capital and general corporate purposes. See "Use of Proceeds" on page S-17 of this prospectus supplement.
	Risk Factors	Investing in our Common Stock involves a high degree of risk. See the information contained in or incorporated by reference under the heading "Risk Factors" beginning on page S-8 of this prospectus supplement, in the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement and any free writing prospectus that we authorize for use in connection with this offering.
	Nasdaq Capital Market symbol	"VINC".

The number of shares of Common Stock that will be outstanding after this offering is based on 31,395,903 shares of Common Stock outstanding as of September 30, 2024, and excludes:

- 909,732 shares available for future issuance under our 2020 Incentive Plan;
- 317,894 shares available for future issuance under our 2021 Employee Stock Purchase Plan;
- 5,784,602 shares issuable upon the exercise of outstanding stock options under our 2020 Incentive Plan;
- 1,470,314 shares issuable upon the settlement of outstanding restricted stock units;
- 14,276,000 shares issuable upon the exercise of outstanding pre-funded warrants to purchase Common Stock, with an exercise price of \$0.0001 per share, which have been fully exercised subsequent to September 30, 2024;
- 22,000,000 shares issuable upon the exercise of outstanding warrants to purchase Common Stock, with an exercise price of \$1.00 per share;
- 3,295,000 shares issuable upon the exercise of outstanding private warrants to purchase Common Stock, with an exercise price of \$11.50 per share;
- up to 6,000,000 shares of Common Stock that may be issuable as Earnout Shares.

The shares issuable upon the exercise of outstanding warrants does not include 10,904,140 shares issuable upon the exercise of outstanding warrants to purchase Common Stock, with an exercise price of \$0.1839, which warrants were issued on December 27, 2024 pursuant to a securities purchase agreement dated December 26, 2024 (the "Purchase Agreement") in a registered direct offering. In addition, the shares reserved for future issuance referenced above does not include 2,239,580 shares available for future issuance under the 2020 Incentive Plan and 447,916 shares available for future issuance under our 2021 Employee Stock Purchase Plan, which shares became available for issuance as of January 1, 2025 pursuant to "evergreen" provisions contained in the respective plans.

Subsequent to September 30, 2024, 94,901 shares of Common Stock were issued under our 2021 Employee Stock Purchase Plan, 992,555 shares of Common Stock were issued pursuant to the vesting of restricted stock units, 14,276,000 shares of Common Stock were issued pursuant to the exercise of pre-funded warrants to purchase Common Stock, with an exercise price of \$0.0001 per share, and 2,624,411 shares of Common Stock were issued upon the exercise of pre-funded warrants to purchase Common Stock that were issued pursuant to the Purchase Agreement.

RISK FACTORS

Investing in our securities involves risks. Before making an investment decision, you should carefully consider the risks and other information we include or incorporate by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering. In particular, you should consider the risk factors described below, as well as the risk factors described under the heading "Risk Factors" in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2024, as such risk factors may be revised, supplemented or superseded from time to time by other reports we file with the SEC, including by our Current Reports on Form 8-K. In addition to those risk factors, there may be additional risks and uncertainties which are not currently known to us or that we currently deem immaterial. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

Risks Related to Operating as a Public Company

We require substantial additional capital to finance our operations. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce, or eliminate one or more of our research and drug development programs or future commercialization efforts and may not be able to continue as a going concern.

Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is a very time-consuming, expensive, and uncertain process that takes years to complete. Even if one or more of the product candidates that we develop is approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate. These expenditures will include payments associated with the Bayer License Agreement and development and commercial milestones, in each case prior to generating any product sales. Additionally, following commencement of any commercial sales of our licensed products, we will be responsible for significant further payments upon the achievement of certain sales milestones and tiered royalty payments on net commercial sales.

Our expenses could increase beyond expectations if we are required by the U.S. Food and Drug Administration or other regulatory agencies, or otherwise believe it to be appropriate, to perform clinical trials or preclinical studies in addition to those that we currently anticipate. Other unanticipated costs may also arise. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to drug sales, marketing, manufacturing, and distribution. Because the design and outcome of our planned and anticipated clinical trials are highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of any product candidate we develop. We also expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in order to maintain our continuing operations.

We had cash of approximately \$2.4 million as of January 9, 2025. We intend to use our existing capital resources for working capital and other general corporate purposes. Based on our current business plans and assumptions, we believe that our existing cash will be sufficient to fund our operating expenses and capital expenditure requirements through the second quarter of 2025. Our estimate as to how long we expect our existing cash and cash equivalents to be able to continue to fund our operating expenses and capital expenditure requirements is based on plans and assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Changing circumstances, some of which may be beyond our control, could result in less cash available to us or cause us to consume capital significantly faster than we currently anticipate, and we may need or choose to seek additional funds sooner than planned.

We will be required to obtain further funding through public or private equity offerings, debt financings, collaborations and licensing arrangements, or other sources, which may dilute our stockholders or restrict our

operating activities. Raising additional funds by issuing equity or convertible debt securities may cause our stockholders to experience substantial dilution. Raising additional funds through debt financing may involve covenants that restrict our business activities and options. To the extent that we raise additional funds through collaborations and licensing arrangements, we may have to relinquish valuable rights to our drug discovery and other technologies, development programs, or product candidates, or grant licenses on terms that may not be favorable to us. Additional funding may not be available to us on favorable terms, or at all, particularly in light of the current economic and market conditions. We do not have any committed external source of funds. Market volatility resulting from inflation and other economic and market conditions, the conflicts in Ukraine and the Middle East, the inability to maintain our listing on the Nasdaq Capital Market, or other factors could also adversely impact our ability to access capital as and when needed or on acceptable terms would have a negative impact on our financial condition and our ability to pursue our business strategy, and we may have to delay, reduce the scope of, suspend, or eliminate one or more of our preclinical programs, clinical trials, or future commercialization efforts, or curtail our operations.

In accordance with Accounting Standards Update 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern* (Subtopic 205-40), we have evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern for a period of one year after the date that our unaudited condensed consolidated financial statements are issued. In light of our existing cash resources and current and expected operating losses and negative cash flows, we expect to need additional capital prior to the one-year anniversary of the issuance of our unaudited condensed consolidated financial statements, and such additional capital may not be available as and when needed on acceptable terms or at all. As a result, we have concluded that these circumstances and the uncertainties associated with our ability to obtain additional capital raise substantial doubt about our ability to continue as a going concern for a period of one year after the date that our unaudited condensed consolidated financial statements are issued.

If we are not able to maintain compliance with the continued listing requirements of The Nasdaq Stock Market LLC ("Nasdaq"), our Common Stock may be delisted, which could negatively impact the liquidity and price of our Common Stock, our ability to access the capital markets, and the confidence of investors and others.

On September 14, 2023, we received written notice from Nasdaq that the closing bid price of our Common Stock for the prior 30 consecutive business days was lower than the minimum bid price requirement of \$1.00 per share. On January 12, 2024, we received written notice from Nasdaq that we had regained compliance with the minimum bid price requirement.

On May 22, 2024, we received a subsequent notice from Nasdaq that based upon the closing bid price of our shares of Common Stock for the prior 30 consecutive business days leading up to the date of the letter, we did not meet the minimum bid price requirement. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided with a period of 180 calendar days, to November 18, 2024, to regain compliance with the minimum bid price requirement. Since the date of the notice letter from Nasdaq on May 22, 2024, our Common Stock has failed to maintain a minimum closing bid price of \$1.00 per share. On November 14, 2024, we submitted a request to Nasdaq for an additional 180-day extension to regain compliance with the minimum bid price requirement. On November 19, 2024, we received a letter from Nasdaq advising that we had been granted an additional 180-day extension, to May 19, 2025, to regain compliance with the minimum bid price requirement.

In the event we are delisted from Nasdaq, the only established trading market for our Common Stock would be eliminated and our Common Stock may then trade on the OTC Bulletin Board or other small trading markets. As a result, investors would likely find it more difficult to trade, or to obtain accurate price quotations for, our Common Stock. Delisting would likely also reduce the visibility, liquidity and value of our Common Stock, including as a result of reduced institutional investor interest in the Company, and may increase the volatility of our Common Stock. Delisting could also cause a loss of confidence of potential industry partners and employees, which could further harm our business and our future prospects.

Even if we regain compliance, there can be no assurance that we will be able to continue to maintain compliance with the Nasdaq continued listing requirements, and if we fail to do so and Nasdaq delists our Common Stock, we could face material adverse consequences, including:

- limited availability of market quotations and decreased liquidity for our Common Stock, resulting in a decline in the trading price of our Common Stock;
- adverse impact on the ability of stockholders to sell our Common Stock;
- limited news and analyst coverage and negative publicity; and
- decreased ability to raise capital and potential loss of confidence by investors, suppliers, customers, collaborators, and employees.

Our ability to raise additional capital, including selling shares of Common Stock under the Sales Agreement, may be limited if the public float of our Common Stock is less than \$75 million.

This prospectus supplement is not currently subject to the restrictions set forth in General Instruction I.B.6. to Form S-3, which limits the size of primary public offerings of companies whose public float is less than \$75 million to no more than one-third (1/3) of the aggregate market value of the voting and non-voting common equity held by non-affiliates (i.e., the public float), which is commonly referred to as the "baby shelf limitation." Our public float is currently below \$75 million, and if our public float is below \$75 million at the time we file our next Annual Report on Form 10-K, which we currently expect to be the case, we will be subject to the baby shelf limitation. If we are subject to the baby shelf limitation, our ability to raise additional capital in the public markets in the future, including our ability to sell shares of Common Stock under the Sales Agreement, may be limited, which could have an adverse effect on our business and prospects.

Risks Related to the Proposed Business Combination

The announced proposed transactions with Oqory and its affiliates may not be consummated on the terms described in the binding term sheet or at all.

We entered into a binding term sheet with Oqory and Vivasor, Inc. relating to a proposed business combination between us and Oqory as described under "Prospectus Supplement Summary—Recent Developments". Although we anticipate entering into a definitive business combination agreement in the first quarter of 2025, no assurance can be given that we will be able to do so within that timeframe or at all. Execution of a definitive business combination agreement is subject to a number of conditions in the term sheet, including interim financing in the amount of at least \$500,000, which is to be provided on or prior to January 31, 2025 or the execution of the business combination agreement and completion of due diligence by each party to its satisfaction, including our satisfactory review of intellectual property and cancer patients' CT and MRI scans in selective clinical sites in the People's Republic of China, which interim financing and due diligence have not been completed as of the date of this prospectus supplement, as well as successful negotiation of the terms and conditions of the business combination agreement. In addition, even if we were to negotiate and enter into a definitive business combination agreement, there is no assurance that the proposed business combination would be consummated on the terms described in the binding term sheet, or at all.

Failure to enter into a definitive business combination agreement or consummate the proposed business combination could negatively affect our market price, future business, and financial results.

The terms of a definitive business combination agreement are subject to negotiation, and we cannot guarantee that we will be able to reach acceptable terms. Execution of the definitive business combination agreement is subject to various conditions in the term sheet, including completion of due diligence by each party. In the event that we are unable to negotiate a definitive business combination agreement or consummate the

proposed business combination, it will have a material adverse effect on our business, financial condition, and results of operation, including the following:

- Costs related to the negotiation of a business combination agreement, such as legal, accounting, and financial advisory fees;
- Declines in the market price of our Common Stock to the extent that our current market price reflects an assumption that the business combination will be consummated;
- The diversion of management's attention from day-to-day business operations and the potential disruption to each company's employees
 and business relationships during a period the definitive business combination agreement is being negotiated and stockholder approval is
 being solicited;
- Difficulty in obtaining additional financing; and
- Becoming subject to litigation related to the proposed business combination.

In the event we are able to enter into a definitive business combination agreement, we cannot guarantee that the closing conditions, including obtaining the requisite stockholder approval, set forth in such business combination agreement, will be satisfied. If we are unable to satisfy the closing conditions in Oqory's favor or if other mutual closing conditions are not satisfied, Oqory will not be obligated to complete the business combination.

If the business combination is not completed, our board of directors may evaluate other strategic alternatives that may be available, which alternatives may not be as favorable to our stockholders as the business combination or may not be available at all.

We and Oqory will be subject to various uncertainties while the proposed business combination is pending that could adversely affect our financial results or the anticipated benefits of the business combination.

Uncertainty about the effect of the proposed business combination on counterparties to contracts, employees, consultants, and other parties may have an adverse effect on us or the anticipated benefits of the business combination. These uncertainties could cause contract counterparties and others who deal with us or Oqory to seek to change to existing business relationships with us or Oqory and may impair our or Oqory's ability to attract, retain, and motivate key personnel until the business combination is completed and for a period of time thereafter. Retention and recruitment of employees and consultants may be particularly challenging prior to the completion of the business combination, as our employees and consultants and prospective employees and consultants, and the employees and consultants and prospective employees and consultants of Oqory, may experience uncertainty about their future roles with us following the business combination.

The negotiations to enter into a definitive business combination agreement, pursuit of the business combination, and the preparation for the combination of the two companies may place a significant burden on management and internal resources. Any significant diversion of management attention away from ongoing business and any difficulties encountered in the negotiations, transition, and integration process could affect our financial results prior to and/or following the consummation of the business combination and could limit us from pursuing attractive business opportunities and making other changes to our business prior to the entry into a definitive business combination agreement and/or completion of the business combination.

We expect to incur substantial transaction costs in connection with the proposed business combination.

We expect to incur a significant amount of non-recurring expenses in connection with the proposed business combination, including legal, accounting, consulting, and other expenses. In general, these expenses are payable by us whether or not the business combination is completed. Additional unanticipated costs may be incurred following consummation of the business combination in the course of the integration of our businesses and the business of Oqory.

Risks Related to This Offering

You may experience future dilution as a result of future equity issuances.

In order to raise additional capital, we may at any time, including during the pendency of this offering, offer additional shares of our Common Stock or other securities convertible into, exercisable or exchangeable for our Common Stock at prices that may not be the same as the price per share in this offering. We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by investors in this offering, which would result in those newly issued shares being dilutive. If we obtain further funds through a credit facility or through the issuance of debt or preferred securities, these securities would likely also have rights senior to your rights as a holder of Common Stock, which could impair the value of our Common Stock.

Sales of a significant number of shares of our Common Stock in the public markets, or the perception that such sales could occur, could depress the market price of our Common Stock.

Sales of a substantial number of shares of our Common Stock in the public markets or the perception that such sales could occur, could depress the market price of our Common Stock and impair our ability to raise capital through the sale of additional equity securities. We may sell a significant number of shares of our Common Stock at any time pursuant to this prospectus supplement and the accompanying prospectus or in one or more separate offerings. We cannot predict the effect that future sales of our Common Stock would have on the market price of our Common Stock. In addition, the sale of substantial amounts of our Common Stock could adversely impact the price of Common Stock.

As of September 30, 2024, we had outstanding (a) 31,395,903 shares of our Common Stock, (b) 5,784,602 shares of Common Stock subject to stock options granted under the 2020 Incentive Plan at a weighted-average exercise price of \$0.94 per share, (c) 909,732 shares available for future issuance under our 2020 Incentive Plan, (d) 1,470,314 shares issuable upon the settlement of outstanding restricted stock units, (e) 14,276,000 shares issuable upon the exercise of outstanding pre-funded warrants to purchase Common Stock, with an exercise price of \$0.0001 per share, which have been fully exercised subsequent to September 30, 2024, (f) 22,000,000 shares issuable upon the exercise of outstanding warrants to purchase Common Stock, with an exercise price of \$1.00 per share, (g) 3.295,000 shares issuable upon the exercise of outstanding private warrants to purchase Common Stock, with an exercise price of \$11.50 per share and (f) up to 6,000,000 shares of Common Stock that may be issuable as Earnout Shares. The shares issuable upon the exercise of outstanding warrants does not include 10,904,140 shares issuable upon the exercise of outstanding warrants to purchase Common Stock, with an exercise price of \$0.1839, which warrants were issued on December 27, 2024 pursuant to the Purchase Agreement in a registered direct offering. In addition, the shares reserved for future issuance referenced above does not include 2,239,580 shares available for future issuance under the 2020 Incentive Plan and 447,916 shares available for future issuance under our 2021 Employee Stock Purchase Plan, which shares became available for issuance as of January 1, 2025 pursuant to "evergreen" provisions contained in the respective plans. Subsequent to September 30, 2024, 94,901 shares of Common Stock were issued under our 2021 Employee Stock Purchase Plan, 992,555 shares of Common Stock were issued pursuant to the vesting of restricted stock units, 14,276,000 shares of Common Stock were issued pursuant to the exercise of pre-funded warrants to purchase Common Stock, with an exercise price of \$0.0001 per share, and 2,624,411 shares of Common Stock were issued upon the exercise of pre-funded warrants to purchase Common Stock that were issued pursuant to the Purchase Agreement. The sale or the availability for sale of a large number of shares of our Common Stock in the public market could cause the price of our Common Stock to decline.

The actual number of shares we will sell under the Sales Agreement, at any one time or in total, as well as the gross proceeds resulting from those sales, is uncertain.

Subject to certain limitations in the Sales Agreement and compliance with applicable law, we have the discretion to deliver a placement notice to Wainwright at any time throughout the term of the Sales Agreement. The number of shares that are sold by Wainwright under the Sales Agreement and upon delivery of a placement

notice will fluctuate based on the market price of our Common Stock during the sales period and the limits we set with Wainwright. Because the price of each share sold will fluctuate based on the market price of our Common Stock during the sales period, it is not possible to predict the number of shares that will ultimately be sold or the gross proceeds to be raised in connection with the sale of shares of the Common Stock offered under this prospectus supplement and the accompanying prospectus.

We have broad discretion in the use of our cash and cash equivalents, including the net proceeds we receive in this offering, and may not use them effectively.

Our management has broad discretion to use our cash and cash equivalents, including the net proceeds we receive in this offering, to fund our operations, and could spend these funds in ways that do not improve our results of operations or enhance the value of our Common Stock, and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our Common Stock to decline and delay the development of our product candidates. You will not have the opportunity to influence our decisions on how to use our cash and cash equivalents, including the net proceeds from this offering. Pending their use to fund our operations, we may invest our cash and cash equivalents in a manner that does not produce income or that loses value.

The Common Stock offered hereby will be sold in "at the market offerings" and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and accordingly may experience different levels of dilution and different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, pricing and number of shares sold, and there is no maximum sales price. Pursuant to the parameters set by our board of directors, there will be a minimum sales price for shares of Common Stock sold in this offering, which will limit our ability to make sales if the public trading price of our Common Stock drops below that minimum sales price. Such minimum sales price may be below the price paid by investors in this offering. Further, our board of directors will retain the ability to increase or decrease such minimum sales price in the future. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

We have never paid dividends on our capital stock and we do not anticipate paying dividends in the foreseeable future.

We have never paid dividends on any of our capital stock and currently intend to retain any future earnings to fund the growth of our business. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant. As a result, capital appreciation, if any, of our Common Stock will be the sole source of gain for the foreseeable future.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein contain forward-looking statements. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act and Section 21E of the Exchange Act. All statements other than statements of historical fact contained in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein, including without limitation, statements regarding the following, are forward-looking statements:

- our ability to negotiate and enter into a definitive business combination agreement with Oqory, Inc. and consummate the business combination and related transactions;
- potential terms and benefits of any potential business combination;
- our expectations regarding the terms of a proposed business combination;
- our future financial and business performance;
- strategic plans for our business and product candidates;
- the attributes of, and our ability to develop or commercialize, our product candidates;
- the strength of our pipeline, product candidates, VersAptx platform, and management team;
- the expected results and timing of clinical trials and nonclinical studies;
- our future capital requirements and sufficiency of available cash, including our expected cash runway, timing of those requirements, and sources and uses of cash;
- our ability to obtain funding for our operations and continue as a going concern;
- our ability to adjust our operating plan spending levels;
- our ability to comply with the terms of the Bayer License Agreement;
- our expected use of proceeds from this offering and our existing cash and cash equivalents;
- our ability to maintain compliance with the continued listing requirements of the Nasdaq Capital Market;
- developments and expectations relating to our competitors and industry;
- our expectations regarding our ability to obtain, develop, and maintain intellectual property protection and not infringe on the rights of others;
- our ability to retain key scientific or management personnel;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act;
- the outcome of any known and unknown litigation and regulatory proceedings;
- our business, expansion plans, and opportunities; and
- changes in applicable laws or regulations.

These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "continue" "could," "estimate," "expect," "forecast," "goal" "intend," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "seeks," "suggest," "scheduled," "target," or "will," or the negative of these terms or other similar

expressions. The forward-looking statements in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein contain forward-looking statements that reflect our plans and strategy for our business and related financing. Our actual results and the timing of events could differ materially from those anticipated in the forward-looking statements.

These statements are subject to known and unknown risks, uncertainties, and assumptions that could cause actual results to differ materially from those projected or otherwise implied by the forward-looking statements, including the following:

- risks associated with preclinical or clinical development and trials;
- risks related to the timing of expected business and product development milestones;
- changes in the assumptions underlying our expectations regarding our future business or business model;
- our ability to develop, manufacture, and commercialize product candidates;
- our need for capital and capital requirements;
- our ability to raise capital and continue as a going concern;
- risks related to entering into and completing a business combination transaction, and changes in the proposed terms thereof;
- risks related to the potential terms of a business combination;
- · general economic, financial, legal, political, and business conditions and changes in domestic and foreign markets;
- changes in applicable laws or regulations, including the impact of the Inflation Reduction Act of 2022 and potential legislation restricting the use of foreign third-party service providers;
- the impact of natural disasters, including climate change, wildfires, and the impact of health pandemics and epidemics on our business;
- the size and growth potential of the markets for our products, and our ability to compete in those markets;
- market acceptance of our planned products;
- the effects of other economic, business, or competitive factors, including the impact of inflation and the conflicts in Ukraine and the Middle East; and
- other risks and uncertainties set forth in this prospectus supplement in the section entitled "Risk Factors."

Given these and other risks and uncertainties described in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein, you should not place undue reliance on these forward-looking statements.

Forward-looking statements speak only as of the date of this prospectus supplement. Except as required under the federal securities laws and rules and regulations of the SEC, we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions, or circumstances on which any such statement is based.

These factors should be read in conjunction with the other factors described under the heading "Risk Factors" in this prospectus supplement and the risk factors and cautionary statements described in other documents that we file from time to time with the SEC, specifically under the heading "Risk Factors" and elsewhere in our most recent Annual Report on Form 10-K, as may be updated by subsequent annual, quarterly and other reports that are incorporated by reference into this prospectus supplement and the accompanying prospectus. You should evaluate all forward-looking statements made in this prospectus supplement and the accompanying prospectus, including the documents we incorporate by reference, in the context of these risks and uncertainties.

You should read this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein completely and with the understanding that our actual future results, levels of activity, and performance, as well as other events and circumstances may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

USE OF PROCEEDS

We may issue and sell shares of our Common Stock having an aggregate sales proceeds of up to \$30,000,000 from time to time. Because we are not required to sell any shares of Common Stock under the Sales Agreement, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares of Common Stock under or fully utilize the Sales Agreement as a source of financing.

We currently intend to use the net proceeds from this offering, if any, for working capital and general corporate purposes.

As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses of the proceeds, if any, from this offering. Accordingly, we will retain broad discretion over the use of any such proceeds. Pending the use of the net proceeds from this offering as described above, we intend to invest the net proceeds in investment-grade, short-term interest-bearing instruments.

PLAN OF DISTRIBUTION

We have entered into a Sales Agreement with Wainwright under which we may issue and sell shares of our Common Stock having an aggregate gross sales price of up to \$30,000,000 of our Common Stock from time to time through or to Wainwright acting as our sales agent or principal.

Upon delivery of a placement notice and subject to the terms and conditions of the Sales Agreement, Wainwright may sell our Common Stock by any method permitted by law and deemed to be an "at the market offering" as defined in Rule 415 promulgated under the Securities Act, including sales made directly on or through the Nasdaq Capital Market, the existing trading market for our Common Stock, sales made to or through a market maker other than on an exchange or otherwise, directly to the agent as principal, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or using any other method permitted by law. We may instruct Wainwright not to sell our Common Stock if the sales cannot be effected at or above a minimum price designated by us from time to time. We or Wainwright may suspend the offering of our Common Stock under the Sales Agreement upon proper notice and subject to other conditions.

We will pay Wainwright commissions, in cash, for its services in acting as agent in the sale of our Common Stock. Wainwright will be entitled to compensation at a fixed commission rate equal to 3.0% of the gross proceeds from the sales of any Common Stock sold pursuant to the Sales Agreement. Because there is no minimum offering amount required as a condition of this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. Pursuant to the terms of the Sales Agreement, we have also agreed to reimburse Wainwright for certain specified expenses, including the fees and disbursements of its legal counsel following the execution of the first applicable sale pursuant to the Sales Agreement, (i) in an amount not to exceed \$75,000 and (ii) in an amount not to exceed \$25,000 for each program "refresh" (filing of a new registration statement, prospectus or prospectus supplement relating to the shares of Common Stock to be sold pursuant to the Sales Agreement, we agreed to reimburse Wainwright for the documented fees and costs of its legal counsel reasonably incurred in connection with Wainwright's ongoing diligence arising from the transactions contemplated by the Sales Agreement in an amount not to exceed \$3,500 per quarter and \$5,000 in connection with the annual report filing. We estimate that total expenses for the offering excluding compensation payable to Wainwright under the terms of the Sales Agreement will be approximately \$300,000.

Settlement for sales of our Common Stock will occur on the first trading day following the date on which any sales are made (or any such shorter settlement cycle as may be in effect under Exchange Act Rule 15c6-1 from time to time), or on some other date that is agreed upon by us and Wainwright in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our Common Stock as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and Wainwright may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

Wainwright will use its commercially reasonable efforts, consistent with its normal sales and trading practices, to solicit offers to purchase the Common Stock under the terms and subject to the conditions set forth in the Sales Agreement. In connection with the sale of the shares of Common Stock on our behalf, Wainwright will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Wainwright will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to Wainwright against certain civil liabilities, including liabilities under the Securities Act.

This offering of our Common Stock pursuant to Sales Agreement will terminate upon the earlier of (1) the sale of all of our Common Stock subject to this prospectus supplement or (2) the termination of the Sales

Agreement as permitted therein. We and Wainwright may each terminate the Sales Agreement at any time upon prior written notice.

To the extent required by Regulation M, Wainwright will not engage in any market making activities involving our Common Stock while the offering is ongoing under this prospectus supplement. The agent and its affiliates may in the future provide various investment banking, commercial banking and other financial services for us and our affiliates, for which they may in the future receive customary fees.

Any portion of the Common Stock included in this prospectus supplement that are not previously sold or included in an active placement notice pursuant to the Sales Agreement are available for sale in other offerings pursuant to our registration statement, of which this prospectus supplement forms a part, and the accompanying base prospectus.

Our Common Stock is listed and traded on the Nasdaq Capital Market under the symbol "VINC." The transfer agent and registrar of our Common Stock is Continental Stock Transfer & Trust Company.

LEGAL MATTERS

The validity of the Common Stock offered by this prospectus supplement will be passed upon for us by Pillsbury Winthrop Shaw Pittman LLP, Palo Alto, California. Ellenoff Grossman & Schole LLP, New York, New York is acting as counsel for H.C. Wainwright & Co., LLC in this offering.

EXPERTS

The consolidated financial statements of Vincerx Pharma, Inc. as of and for the periods ended December 31, 2023 and 2022 incorporated by reference herein, have been audited by WithumSmith+Brown, PC, an independent registered public accounting firm, as set forth in their report incorporated by reference herein, and are included in reliance upon such report given on the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-3 with the SEC under the Securities Act. This prospectus supplement and the accompanying prospectus are part of the registration statement, but the registration statement includes and incorporates by reference additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a web site that contains reports, proxy and information statements and other information regarding companies, such as ours, that file documents electronically with the SEC. The address of that site on the worldwide web is www.sec.gov. The information on the SEC's web site is not part of this prospectus supplement or the accompanying prospectus, and any references to this web site or any other web site are inactive textual references only.

The SEC permits us to "incorporate by reference" the information contained in documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus supplement and the accompanying prospectus. Information that is incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus and you should read it with the same care that you read this prospectus supplement and the accompanying prospectus. Later information that we file with the SEC will automatically update and supersede the information that is either contained, or incorporated by reference, in this prospectus supplement and the accompanying prospectus, and will be considered to be a part of this prospectus supplement and the accompanying prospectus from the date those documents are filed. We have filed with the SEC, and incorporate by reference in this prospectus supplement and the accompanying prospectus:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2023;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2024, June 30, 2024, and September 30, 2024;
- our Current Reports on Form 8-K filed with the SEC on January 16, 2024, March 29, 2024 (filed pursuant to Items 1.01 and 9.01), <u>April 8, 2024, April 25, 2024</u> (solely with respect to Item 8.01), <u>April 26, 2024, May 28, 2024, August 16, 2024</u>, <u>October 7, 2024</u>, <u>November 25, 2024</u>, <u>December 6, 2024</u>, <u>December 27, 2024</u>, and <u>January 16, 2025</u>; and
- the description of our common stock contained in our Registration Statement on Form 8-A filed on <u>March 5, 2020</u>, as updated by the description set forth in <u>Exhibit 4.6</u> to our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, together with any amendment or report filed with the SEC for the purpose of updating such description.

We also incorporate by reference all additional documents that we file with the SEC under the terms of Section 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus supplement and the

termination of any offering of securities offered by this prospectus supplement and the accompanying prospectus. We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

You may request a copy of any or all of the documents incorporated by reference but not delivered with this prospectus supplement and the accompanying prospectus, at no cost, by writing or telephoning us at the following address and number: Vincerx Pharma, Inc., 1825 S. Grant Street, San Mateo, California 94402, telephone (650) 800-6676. We will not, however, send exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents.

PROSPECTUS

\$150,000,000



Vincerx Pharma, Inc.

Debt Securities Common Stock Preferred Stock Depositary Shares Warrants Rights

We may, from time to time, offer and sell the securities identified above in one or more offerings. The aggregate initial offering price of all securities sold under this prospectus will not exceed \$150,000,000.

This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in supplements to this prospectus. The prospectus supplements will also describe the manner in which these securities will be offered and may also add to, update or change information contained in this prospectus. You should read carefully this prospectus and the accompanying prospectus supplement before you invest.

We may offer and sell these securities separately or together in any combination for sale directly to investors or through underwriters, dealers or agents. If any underwriters, dealers or agents are involved in the sale of any of these securities, we will set forth their names and describe their compensation in the applicable prospectus supplement.

Our common stock is listed on the Nasdaq Capital Market under the symbol "VINC." On January 27, 2022, the last reported sale price of our common stock on the Nasdaq Capital Market was \$6.77 per share.

Investing in our securities involves risks. See the section entitled "<u>Risk Factors</u>" included in or incorporated by reference into the accompanying prospectus supplement and in the documents we incorporate by reference in this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is January 28, 2022

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We have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus, any applicable prospectus supplement or any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus and any prospectus supplement, or incorporated by reference, is accurate only as of the dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration, or continuous offering, process. Under this shelf registration process, we may, from time to time, offer and sell separately or together in any combination the securities described in this prospectus in one or more offerings up to a maximum aggregate offering price of \$150,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering and the offered securities. Any prospectus supplement, or information incorporated by reference in this prospectus or any prospectus supplement, may also add, update or change information contained in this prospectus. Any statement that we make in this prospectus will be modified or superseded by any inconsistent statement made by us in a prospectus supplement. The registration statement we filed with the SEC includes exhibits that provide more detail of the matters discussed in this prospectus. You should read this prospectus and the related exhibits filed with the SEC and any prospectus supplement, together with additional information described under the heading "Where You Can Find More Information," before making your investment decision.

Unless the context otherwise requires, references in this prospectus to the "Company," "Vincerx Pharma," "Vincerx," "we," "us" and "our" refer to Vincerx Pharma, Inc. (f/k/a Vincera Pharma, Inc. f/k/a LifeSci Acquisition Corp.) and its consolidated subsidiaries. References to "LSAC" refer to our predecessor company prior to the consummation of the business combination with VNRX Corp. (f/k/a Vincera Pharma, Inc.), a Delaware corporation, prior to the closing of the business combination, or Vincera Pharma.

RISK FACTORS

Investing in our securities involves risk. The prospectus supplement relating to a particular offering will contain or incorporate by reference a discussion of risks applicable to an investment in the securities offered. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading "Risk Factors" in our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, as well as any prospectus supplement to this prospectus, and the other information contained in or incorporate by reference into this prospectus. See "Where You Can Find More Information." The risks and uncertainties described in the documents we incorporate by reference are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

VINCERX PHARMA, INC.

We are a clinical-stage biopharmaceutical company focused on leveraging our development and oncology expertise to advance new therapies intended to address unmet medical needs for the treatment of cancer. Our current pipeline is entirely derived from a license agreement, dated October 7, 2020, by and between our company and Bayer Aktiengesellschaft and Bayer Intellectual Property GmbH, or the Bayer License Agreement, pursuant to which we have been granted an exclusive, royalty-bearing, worldwide license under certain Bayer patents and know-how to develop, use, manufacture, commercialize, sublicense and distribute a clinical-stage and follow-on small molecule drug program and a preclinical stage bioconjugation platform, which includes next-generation antibody-drug conjugates and innovative small molecule drug conjugates. We intend to use these product candidates to treat various cancers in a patient-specific, targeted approach. We believe that these product candidates are differentiated from current programs targeting similar cancer biology, and, if approved, may improve clinical outcomes of patients with cancer.

Our company was originally known as LifeSci Acquisition Corp. On December 23, 2020, LSAC consummated a business combination with Vincera Pharma, Inc. LSAC was incorporated in the State of Delaware in December 2018 as a special purpose acquisition company. In December 2020, its wholly-owned subsidiary merged with and into Vincera Pharma, with Vincera Pharma surviving the merger as a wholly-owned subsidiary of LSAC. In connection with the business combination, we changed our name to Vincera Pharma, Inc., and subsequently to Vincerx Pharma, Inc. Our principal executive offices are located at 260 Sheridan Avenue, Suite 400, Palo Alto, California 94306. Our telephone number is (650) 800-6676. Our website address is www.vincerx.com. Information contained on our website or connected thereto does not constitute part of, and is not incorporated by reference into, this prospectus or the registration statement of which it forms a part.

FORWARD-LOOKING STATEMENTS

When used in this prospectus, the words "anticipate," "believe," "continue," "could," "estimate," "expect," "intends," "project," "forecast," "may," "might," "plan," "possible," "potential," "project," "should," "seeks," "scheduled," or "will," and similar expressions are intended to identify forward-looking statements, and include but are not limited to:

- our future financial and business performance;
- strategic plans for our business and product candidates;
- our ability to develop or commercialize products;
- the expected results and timing of clinical trials and nonclinical studies;
- our ability to comply with the Bayer License Agreement;
- developments and projections relating to our competitors and industry;
- our expectations regarding our ability to obtain, develop and maintain intellectual property protection and not infringe on the rights of others;
- our ability to retain key scientific or management personnel;
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act;
- our future capital requirements and the timing of those requirements and sources and uses of cash;
- our ability to obtain funding for our operations;
- the outcome of any known and unknown litigation and regulatory proceedings;
- our business, expansion plans and opportunities; and
- changes in applicable laws or regulations.

These statements are subject to known and unknown risks, uncertainties and assumptions that could cause actual results to differ materially from those projected or otherwise implied by the forward-looking statements, including the following:

- risks associated with preclinical or clinical development and trials, including those conducted prior to our in-licensing;
- risks related to the rollout of our business and the timing of expected business milestones;
- changes in the assumptions underlying our expectations regarding our future business or business model;
- our ability to develop, manufacture and commercialize product candidates;
- general economic, financial, legal, political and business conditions and changes in domestic and foreign markets;
- changes in applicable laws or regulations;
- the impact of natural disasters, including climate change, and the impact of health epidemics, including the COVID-19 pandemic, on our business;

- the size and growth potential of the markets for our products, and our ability to serve those markets;
- market acceptance of our planned products;
- our ability to raise capital;

- the possibility that we may be adversely affected by other economic, business, and/or competitive factors; and
- other risks and uncertainties set forth in this prospectus in the section entitled "Risk Factors" and the documents we have incorporated by reference in this prospectus.

Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. We will discuss many of these risks and uncertainties in greater detail in any prospectus supplement under the heading "Risk Factors." Additional cautionary statements or discussions of risks and uncertainties that could affect our results or the achievement of the expectations described in forward-looking statements may also be contained in the documents we incorporate by reference into this prospectus.

These forward-looking statements speak only as of the date of this prospectus. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based, except as required by law or regulation. You should, however, review additional disclosures we make in our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K filed with the SEC.

USE OF PROCEEDS

Unless we state otherwise in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities offered by this prospectus for general corporate purposes. General corporate purposes may include additions to working capital, financing of capital expenditures, repayment or redemption of existing indebtedness, repurchases of stock, and future acquisitions and strategic investment opportunities. Unless we state otherwise in the applicable prospectus supplement, pending the application of net proceeds, we expect to invest the net proceeds in investment grade, interest-bearing securities.

DESCRIPTION OF DEBT SECURITIES

The following is a summary of the general terms of the debt securities. We will file a prospectus supplement that may contain additional terms when we issue debt securities. The terms presented here, together with the terms in a related prospectus supplement, together with any pricing supplement or term sheet, will be a description of the material terms of the debt securities.

We may issue, from time to time, debt securities, in one or more series. These debt securities that we may issue include senior debt securities, senior subordinated debt securities, convertible debt securities and exchangeable debt securities. The debt securities we offer will be issued under an indenture between us and the trustee named in the indenture. The following is a summary of the material provisions of the form of indenture filed as an exhibit to the registration statement of which this prospectus is a part. All capitalized terms have the meanings specified in the indenture. For each series of debt securities, the applicable prospectus supplement for the series may change and supplement the summary below.

As used in this section only, "we," "us" and "our" refer to Vincerx Pharma, Inc. excluding our subsidiaries, unless expressly stated or the context otherwise requires.

General Terms of the Indenture

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities for any series of debt securities up to the principal amount that we may authorize. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us. For each series of debt securities, any restrictive covenants for those debt securities will be described in the applicable prospectus supplement for those debt securities.

We may issue the debt securities issued under the indenture as "discount securities," which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may, for United States federal income tax purposes, be treated as if they were issued with "original issue discount," or OID, because of interest payment and other characteristics. Special United States federal income tax considerations applicable to debt securities issued with original issue discount will be described in more detail in any applicable prospectus supplement.

You should refer to the prospectus supplement relating to a particular series of debt securities for a description of the following terms of the debt securities offered by that prospectus supplement and by this prospectus:

- the title of those debt securities;
- any limit on the aggregate principal amount of that series of debt securities;
- the date or dates on which principal and premium, if any, of the debt securities of that series is payable;
- the interest rate or rates (which may be fixed or variable) or the method used to determine the rate or rates, and the date or dates from which interest, if any, on the debt securities of that series will accrue, and the dates when interest is payable and related record dates;
- the right, if any, to extend the interest payment periods and the duration of the extensions;
- if the amount of payments of principal or interest is to be determined by reference to an index or formula, or based on a coin or currency other than that in which the debt securities are stated to be payable, the manner in which these amounts are determined and the calculation agent, if any, with respect thereto;

- the place or places where and the manner in which principal, premium, if any, and interest, if any, on the debt securities of that series will be payable and the place or places where those debt securities may be presented for transfer and, if applicable, conversion or exchange;
- the period or periods within which, the price or prices at which and other terms and conditions upon which those debt securities may be redeemed, in whole or in part, at our option or the option of a holder of those securities, if we or a holder is to have that option;
- our obligation or right, if any, to redeem, repay or purchase those debt securities pursuant to any sinking fund or analogous provision or at the option of a holder of those securities, and the terms and conditions upon which the debt securities will be redeemed, repaid or purchased, in whole or in part, pursuant to that obligation;
- the terms, if any, on which the debt securities of that series will be subordinate in right and priority of payment to our other debt;
- the denominations in which those debt securities will be issuable;
- if other than the entire principal amount of the debt securities when issued, the portion of the principal amount payable upon acceleration of maturity as a result of a default on our obligations;
- whether any securities of that series are to be issued in whole or in part in the form of one or more global securities and the depositary for those global securities;
- if the principal of or any premium or interest on the debt securities of that series is to be payable, or is to be payable at our election or the election of a holder of those securities, in securities or other property, the type and amount of those securities or other property, or the manner of determining that amount, and the period or periods within which, and the terms and conditions upon which, any such election may be made;
- the events of default and covenants relating to the debt securities that are in addition to, modify or delete those described in this prospectus;
- conversion or exchange provisions, if any, including conversion or exchange prices or rates and adjustments thereto;
- whether and upon what terms the debt securities may be defeased, if different from the provisions set forth in the indenture;
- the nature and terms of any security for any secured debt securities;
- the terms applicable to any debt securities issued at a discount from their stated principal amount; and
- any other specific terms of any debt securities.

The applicable prospectus supplement will present material United States federal income tax considerations for holders of any debt securities and the securities exchange or quotation system on which any debt securities are to be listed or quoted.

Conversion or Exchange Rights

Debt securities may be convertible into or exchangeable for shares of our equity securities or other securities. The terms and conditions of conversion or exchange will be stated in the applicable prospectus supplement. The terms will include, among others, the following:

- the conversion or exchange price;
- the conversion or exchange period;
- provisions regarding our ability or the ability of any holder to convert or exchange the debt securities;

- events requiring adjustment to the conversion or exchange price; and
- provisions affecting conversion or exchange in the event of our redemption of the debt securities.

Consolidation, Merger or Sale

We cannot consolidate with or merge with or into, or transfer or lease all or substantially all of our assets to, any person, unless we are the surviving corporation or the successor person is a corporation organized under the laws of the United States, any state of the United States or the District of Columbia and expressly assumes our obligations under the debt securities and the indenture. In addition, we cannot complete such a transaction unless immediately after completing the transaction, no event of default under the indenture, and no event that, after notice or lapse of time or both, would become an event of default under the indenture, has occurred and is continuing. When the successor person has assumed our obligations under the debt securities and the indenture except in limited circumstances.

This covenant would not apply to any recapitalization transaction, a change of control affecting us or a highly leveraged transaction, unless the transaction or change of control were structured to include a merger or consolidation or transfer or lease of all or substantially all of our assets.

Events of Default

The indenture provides that the following will be "events of default" with respect to any series of debt securities:

- failure to pay interest for 30 days after the date payment is due and payable;
- failure to pay principal or premium, if any, on any debt security when due, either at maturity, upon any redemption, by declaration or otherwise and, in the case of technical or administrative difficulties, only if such default persists for a period of more than three business days;
- failure to make sinking fund payments when due and continuance of such default for a period of 30 days;
- failure to perform other covenants for 60 days after notice that performance was required;
- · certain events in bankruptcy, insolvency or reorganization relating to us; or
- any other event of default provided in the applicable officer's certificate, resolution of our board of directors or the supplemental indenture under which we issue a series of debt securities.

An event of default for a particular series of debt securities does not necessarily constitute an event of default for any other series of debt securities issued under the indenture. For each series of debt securities, any modifications to the above events of default will be described in the applicable prospectus supplement for those debt securities.

The indenture provides that if an event of default specified in the first, second, third, fourth or sixth bullets above occurs and is continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series may declare the principal amount of all those debt securities (or, in the case of discount securities or indexed securities, that portion of the principal amount as may be specified in the terms of that series) to be due and payable immediately. If an event of default specified in the fifth bullet above occurs and is continuing, then the principal amount of all those debt securities (or, in the case of discount securities or indexed securities, that portion of the principal amount as may be specified in the terms of that series) will be due and payable immediately, without any declaration or other act on the part of the trustee or any holder. In certain cases, holders of a majority in principal amount of the outstanding debt securities of any series may, on behalf of holders of all those debt securities, rescind and annul a declaration of acceleration.

The indenture imposes limitations on suits brought by holders of debt securities against us. Except for actions for payment of overdue principal or interest, no holder of debt securities of any series may institute any action against us under the indenture unless:

- the holder has previously given to the trustee written notice of default and continuance of such default;
- the holders of at least 25% in principal amount of the outstanding debt securities of the affected series have requested that the trustee institute the action;
- the requesting holders have offered the trustee indemnity for the reasonable expenses and liabilities that may be incurred by bringing the action;
- the trustee has not instituted the action within 60 days of the request and offer of indemnity; and
- the trustee has not received inconsistent direction by the holders of a majority in principal amount of the outstanding debt securities of the affected series.

We will be required to file annually with the trustee a certificate, signed by one of our officers, stating whether or not the officer knows of any default by us in the performance, observance or fulfillment of any condition or covenant of the indenture.

Discharge, Defeasance and Covenant Defeasance

We can discharge or decrease our obligations under the indenture as stated below.

We may discharge obligations to holders of any series of debt securities that have not already been delivered to the trustee for cancellation and that have either become due and payable or are by their terms to become due and payable, or are scheduled for redemption, within one year. We may effect a discharge by irrevocably depositing with the trustee cash or government obligations denominated in the currency of the debt securities, as trust funds, in an amount certified to be enough to pay when due, whether at maturity, upon redemption or otherwise, the principal of, and any premium and interest on, the debt securities and any mandatory sinking fund payments.

Unless otherwise provided in the applicable prospectus supplement, we may also discharge any and all of our obligations to holders of any series of debt securities at any time, which we refer to as defeasance. We may also be released from the obligations imposed by any covenants of any outstanding series of debt securities and provisions of the indenture, and we may omit to comply with those covenants without creating an event of default under the trust declaration, which we refer to as covenant defeasance. We may effect defeasance and covenant defeasance only if, among other things:

- we irrevocably deposit with the trustee cash or government obligations denominated in the currency of the debt securities, as trust funds, in an amount certified to be enough to pay at maturity, or upon redemption, the principal (including any mandatory sinking fund payments) of, and any premium and interest on, all outstanding debt securities of the series; and
- we deliver to the trustee an opinion of counsel from a nationally recognized law firm to the effect that the holders of the series of debt securities will not recognize income, gain or loss for U.S. federal income tax purposes as a result of the defeasance or covenant defeasance and that defeasance or covenant defeasance will not otherwise alter the holders' U.S. federal income tax treatment of principal, and any premium and interest payments on, the series of debt securities.

In the case of a defeasance by us, the opinion we deliver must be based on a ruling of the Internal Revenue Service issued, or a change in U.S. federal income tax law occurring, after the date of the indenture, since such a result would not occur under the U.S. federal income tax laws in effect on that date.

Although we may discharge or decrease our obligations under the indenture as described in the two preceding paragraphs, we may not avoid, among other things, our duty to register the transfer or exchange of any series of debt securities, to replace any temporary, mutilated, destroyed, lost or stolen series of debt securities or to maintain an office or agency in respect of any series of debt securities.

Modification of the Indenture

The indenture provides that we and the trustee may enter into supplemental indentures without the consent of the holders of debt securities to, among other things:

- evidence the assumption by a successor entity of our obligations;
- add to our covenants for the benefit of the holders of debt securities, or to surrender any rights or power conferred upon us;
- add any additional events of default;
- add to, change or eliminate any of the provisions of the indenture in a manner that will become effective only when there is no outstanding debt security which is entitled to the benefit of the provision as to which the modification would apply;
- add guarantees with respect to or secure any debt securities;
- establish the forms or terms of debt securities of any series;
- evidence and provide for the acceptance of appointment by a successor trustee and add to or change any of the provisions of the indenture as is necessary for the administration of the trusts by more than one trustee;
- cure any ambiguity or correct any inconsistency or defect in the indenture;
- modify, eliminate or add to the provisions of the indenture as shall be necessary to effect the qualification of the indenture under the Trust Indenture Act of 1939 or under any similar federal statute later enacted, and to add to the indenture such other provisions as may be expressly required by the Trust Indenture Act; and
- make any other provisions with respect to matters or questions arising under the indenture that will not be inconsistent with any provision of the indenture as long as the new provisions do not adversely affect the interests of the holders of any outstanding debt securities of any series created prior to the modification.

The indenture also provides that we and the trustee may, with the consent of the holders of not less than a majority in aggregate principal amount of debt securities of each series of debt securities affected by such supplemental indenture then outstanding, add any provisions to, or change in any manner, eliminate or modify in any way the provisions of, the indenture or any supplemental indenture or modify in any manner the rights of the holders of the debt securities. We and the trustee may not, however, without the consent of the holder of each outstanding debt security affected thereby:

- extend the final maturity of any debt security;
- reduce the principal amount or premium, if any;
- reduce the rate or extend the time of payment of interest;
- reduce the amount of the principal of any debt security issued with an original issue discount that is payable upon acceleration;
- change the currency in which the principal, and any premium or interest, is payable;
- impair the right to institute suit for the enforcement of any payment on any debt security when due;

- if applicable, adversely affect the right of a holder to convert or exchange a debt security; or
- reduce the percentage of holders of debt securities of any series whose consent is required for any modification of the indenture or for waivers of compliance with or defaults under the indenture with respect to debt securities of that series.

The indenture provides that the holders of not less than a majority in aggregate principal amount of the then outstanding debt securities of any series, by notice to the relevant trustee, may on behalf of the holders of the debt securities of that series waive any default and its consequences under the indenture except:

- a default in the payment of, any premium and any interest on, or principal of, any such debt security held by a nonconsenting holder; or
- a default in respect of a covenant or provision of the indenture that cannot be modified or amended without the consent of the holder of each outstanding debt security of each series affected.

Concerning the Trustee

The indenture provides that there may be more than one trustee under the indenture, each for one or more series of debt securities. If there are different trustees for different series of debt securities, each trustee will be a trustee of a trust under the indenture separate and apart from the trust administered by any other trustee under that indenture. Except as otherwise indicated in this prospectus or any prospectus supplement, any action permitted to be taken by a trustee may be taken by such trustee only on the one or more series of debt securities. All payments of principal of, and any premium and interest on, and all registration, transfer, exchange, authentication and delivery of, the debt securities of a series will be effected by the trustee for that series at an office designated by the trustee in New York, New York.

The indenture provides that, except during the continuance of an event of default, the trustee will perform only such duties as are specifically set forth in the indenture. During the existence of an event of default, the trustee will exercise those rights and powers vested in it under the indenture and use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

If the trustee becomes a creditor of ours, the indenture places limitations on the right of the trustee to obtain payment of claims or to realize on property received in respect of any such claim as security or otherwise. The trustee may engage in other transactions. If it acquires any conflicting interest relating to any duties concerning the debt securities, however, it must eliminate the conflict or resign as trustee.

No Individual Liability of Incorporators, Stockholders, Officers or Directors

The indenture provides that no past, present or future director, officer, stockholder or employee of ours, any of our affiliates, or any successor corporation, in their capacity as such, shall have any individual liability for any of our obligations, covenants or agreements under the debt securities or the indenture.

Governing Law

The indenture and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York.

DESCRIPTION OF CAPITAL STOCK

This section describes the general terms and provisions of the shares of our common stock, \$0.0001 par value per share, and preferred stock, \$0.0001 par value per share. This description is only a summary. Our restated certificate of incorporation, or Certificate of Incorporation, and our amended and restated bylaws, or Bylaws, have been filed as exhibits to our periodic reports filed with the SEC, which are incorporated by reference in this prospectus. You should read our Certificate of Incorporation and our Bylaws for additional information before you buy any of our common stock, preferred stock or other securities. See "Where You Can Find More Information."

Authorized and Outstanding Stock

Our Certificate of Incorporation authorizes the issuance of 120,000,000 shares of common stock, \$0.0001 par value per share, and 30,000,000 shares of undesignated preferred stock, \$0.0001 par value per share. As of December 31, 2021, there were 21,057,560 shares of common stock and no shares of preferred stock outstanding. As of December 31, 2021, there were 24 holders of record of our common stock. Because many of our shares of common stock are held by brokers and other nominees on behalf of stockholders, the number of record holders is not indicative of the total number of stockholders represented by these stockholders of record. The outstanding shares of common stock are duly authorized, validly issued, fully paid and non-assessable.

As of December 31, 2021, 3,490,046 shares of common stock were reserved for issuance under our 2020 Incentive Plan and 163,515 shares of common stock were reserved for issuance under our 2021 Employee Stock Purchase Plan.

Common Stock

Voting Power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock and subject to that certain voting and support agreement, dated December 23, 2020, or the Voting Agreement, the holders of common stock possess all voting power for the election of our directors and all other matters requiring stockholder action. Holders of common stock are entitled to one vote per share on matters to be voted on by stockholders.

Dividends

Holders of common stock will be entitled to receive such dividends, if any, as may be declared from time to time by our board of directors in its discretion out of funds legally available therefor.

Liquidation, Dissolution and Winding Up

In the event of our voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of the common stock will be entitled to receive an equal amount per share of all of our assets of whatever kind available for distribution to stockholders, after the rights of the holders of any preferred stock have been satisfied.

Preemptive or Other Rights

Our stockholders have no preemptive or other subscription rights and there are no sinking fund or redemption provisions applicable to common stock.

Election of Directors

Our board of directors is divided into three classes, each of which will generally serve for a term of three years with only one class of directors being elected in each year. There is no cumulative voting with respect to



the election of directors, with the result that the holders of more than 50% of the shares voted for the election of directors can elect all of the directors.

Pursuant to the Voting Agreement, our board of directors consists of nine members, with the stockholders of Vincera Pharma immediately prior to the closing of the business combination having the right to designate seven members and LifeSci Investments, LLC, LifeSci Holdings LLC, Rosedale Park, LLC and certain other LSAC stockholders having the right to designate two members.

Preferred Stock

Our Certificate of Incorporation provides that shares of preferred stock may be issued from time to time in one or more series. Our board of directors is authorized to fix the voting rights, if any, designations, powers and preferences, the relative, participating, optional or other special rights, and any qualifications, limitations and restrictions thereof, applicable to the shares of each series of preferred stock. Our board of directors is able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of the common stock and could have anti-takeover effects. The ability of our board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control of Vincerx or the removal of existing management.

Certain Anti-Takeover Provisions of Delaware Law and Our Certificate of Incorporation and Bylaws

Certain provisions of Delaware law, our Certificate of Incorporation and our Bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging such proposals, including proposals that are priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could result in an improvement of their terms.

Special Meetings of Stockholders

Our Bylaws provide that special meetings of our stockholders may be called only by a majority vote of our board of directors or our Secretary, at the request of our Chairman or the Chief Executive Officer.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Pursuant to Rule 14a-8 of the Exchange Act, proposals seeking inclusion in our annual proxy statement must comply with the notice periods contained therein. To be timely under our Bylaws, a stockholder's notice will need to be received by the Company secretary at our principal executive offices not later than the close of business on the 90th day nor earlier than the open of business on the 120th day prior the anniversary of the date of our proxy statement provided in connection with the previous year's annual meeting of stockholders. Our Bylaws specify certain requirements as to the form and content of a stockholders' meeting. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders.

Authorized but Unissued Shares

Our authorized but unissued common stock and preferred stock are available for future issuances without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. Our board of directors is authorized to issue, without stockholder approval, blank-check preferred stock that, if issued, could operate as a "poison pill" to dilute the

stock ownership of a potential hostile acquirer to prevent an acquisition that is not approved by the board of directors. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Forum Selection

Our Certificate of Incorporation requires, to the fullest extent permitted by law, that derivative actions brought in our name, actions against directors, officers and employees for breach of fiduciary duty and other similar actions may be brought in the Court of Chancery in the State of Delaware or, if that court lacks subject matter jurisdiction, another federal or state court situated in the State of Delaware. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our Certificate of Incorporation. Our Certificate of Incorporation also requires the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action under the Securities Act and the Exchange Act, and the stockholder bringing the suit will be deemed to have to service of process on such stockholder's counsel. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, a court may determine that these provisions are unenforceable, and to the extent they are enforceable, the provisions may have the effect of discouraging lawsuits against our directors and officers, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder.

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder; or
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the "interested stockholder" and an "interested stockholder" is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage business combinations or other attempts that might result in a premium over the market price for the shares of common stock held by our stockholders. Certain provisions of the DGCL, our Certificate of Incorporation and our Bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market

price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Limitation on Liability and Indemnification of Directors and Officers

Our Certificate of Incorporation limits our directors' liability to the fullest extent permitted under the DGCL. The DGCL provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability:

- for any transaction from which the director derives an improper personal benefit;
- for any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- for any unlawful payment of dividends or redemption of shares; or
- for any breach of a director's duty of loyalty to the corporation or its stockholders.

Our Certificate of Incorporation provides that we will, in certain situations, indemnify our directors and officers and may indemnify other employees and other agents, to the fullest extent permitted by law. Any indemnified person is also entitled, subject to certain limitations, to advancement, direct payment, or reimbursement of reasonable expenses (including attorneys' fees and disbursements) in advance of the final disposition of the proceeding.

In addition, we have entered into separate indemnification agreements with our directors and officers. These agreements, among other things, require us to indemnify our directors and officers for certain expenses, including attorneys' fees, judgments, fines, and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as one of our directors or officers or any other company or enterprise to which the person provides services at our request.

We maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe these provisions in our Certificate of Incorporation and our Bylaws and these indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, or control persons, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company.

DESCRIPTION OF DEPOSITARY SHARES

The following description of the depositary shares does not purport to be complete and is subject to and qualified in its entirety by the relevant deposit agreement and the depositary receipts with respect to the depositary shares relating to any particular series of preferred stock. You should read these documents as they, and not this description, will define your rights as a holder of depositary shares. Forms of these documents will be filed with the SEC in connection with the offering of depositary shares.

General

If we elect to offer fractional interests in shares of preferred stock, we will provide for the issuance by a depositary to the public of receipts for depositary shares. Each depositary share will represent fractional interests of preferred stock. We will deposit the shares of preferred stock underlying the depositary shares under a deposit agreement between us and a bank or trust company selected by us. The bank or trust company must have its principal office in the United States and a combined capital and surplus of at least \$50 million. The depositary receipts will evidence the depositary shares issued under the deposit agreement.

The deposit agreement will contain terms applicable to the holders of depositary shares in addition to the terms stated in the depositary receipts. Each owner of depositary shares will be entitled to all the rights and preferences of the preferred stock underlying the depositary shares in proportion to the applicable fractional interest in the underlying shares of preferred stock. The depositary will issue the depositary receipts to individuals purchasing the fractional interests in shares of the related preferred stock according to the terms of the offering described in a prospectus supplement.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions received for the preferred stock to the entitled record holders of depositary shares in proportion to the number of depositary shares that the holder owns on the relevant record date. The depositary will distribute only an amount that can be distributed without attributing to any holder of depositary shares a fraction of one cent. The depositary will add the undistributed balance to and treat it as part of the next sum received by the depositary for distribution to holders of depositary shares.

If there is a non-cash distribution, the depositary will distribute property received by it to the entitled record holders of depositary shares, in proportion, insofar as possible, to the number of depositary shares owned by the holders, unless the depositary determines, after consultation with us, that it is not feasible to make such distribution. If this occurs, the depositary may, with our approval, sell such property and distribute the net proceeds from the sale to the holders. The deposit agreement also will contain provisions relating to how any subscription or similar rights that we may offer to holders of the preferred stock will be available to the holders of the depositary shares.

Conversion, Exchange, Redemption and Liquidation

If any series of preferred stock underlying the depositary shares may be converted or exchanged, each record holder of depositary receipts will have the right or obligation to convert or exchange the depositary shares represented by the depositary receipts.

The terms on which the depositary shares relating to the preferred stock of any series may be redeemed, and any amounts distributable upon our liquidation, dissolution or winding up, will be described in the relevant prospectus supplement.

Voting

When the depositary receives notice of a meeting at which the holders of the preferred stock are entitled to vote, the depositary will mail the particulars of the meeting to the record holders of the depositary shares. Each

record holder of depositary shares on the record date may instruct the depositary on how to vote the shares of preferred stock underlying the holder's depositary shares. The depositary will try, if practical, to vote the number of shares of preferred stock underlying the depositary shares according to the instructions. We will agree to take all reasonable action requested by the depositary to enable it to vote as instructed.

Amendments

We and the depositary may agree to amend the deposit agreement and the depositary receipt evidencing the depositary shares. Any amendment that (a) imposes or increases certain fees, taxes or other charges payable by the holders of the depositary shares as described in the deposit agreement or that (b) otherwise prejudices any substantial existing right of holders of depositary shares, will not take effect until 30 days after the depositary has mailed notice of the amendment to the record holders of depositary shares. Any holder of depositary shares that continues to hold its shares at the end of the 30-day period will be deemed to have agreed to the amendment.

Termination

We may direct the depositary to terminate the deposit agreement by mailing a notice of termination to holders of depositary shares at least 30 days prior to termination. In addition, a deposit agreement will automatically terminate if:

- the depositary has redeemed all related outstanding depositary shares, or
- we have liquidated, terminated or wound up our business and the depositary has distributed the preferred stock of the relevant series to the holders of the related depositary shares.

Payment of Fees and Expenses

We will pay all fees, charges and expenses of the depositary, including the initial deposit of the preferred stock and any redemption of the preferred stock. Holders of depositary shares will pay transfer and other taxes and governmental charges and any other charges as are stated in the deposit agreement for their accounts.

Resignation and Removal of Depositary

At any time, the depositary may resign by delivering notice to us, and we may remove the depositary. Resignations or removals will take effect upon the appointment of a successor depositary and its acceptance of the appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having a combined capital and surplus of at least \$50 million.

Reports

The depositary will forward to the holders of depositary shares all reports and communications from us that are delivered to the depositary and that we are required by law, the rules of an applicable securities exchange or our Certificate of Incorporation to furnish to the holders of the preferred stock. Neither we nor the depositary will be liable if the depositary is prevented or delayed by law or any circumstances beyond its control in performing its obligations under the deposit agreement. The deposit agreement limits our obligations and the depositary's obligations to performance in good faith of the duties stated in the deposit agreement. Neither we nor the depositary will be obligated to prosecute or defend any legal proceeding connected with any depositary shares or preferred stock unless the holders of depositary shares requesting us to do so furnish us with satisfactory indemnity. In performing our obligations, we and the depositary may rely upon the written advice of our counsel or accountants, on any information that competent people provide to us and on documents that we believe are genuine.

DESCRIPTION OF WARRANTS

Outstanding Private Warrants

As of December 31, 2021, there were 3,295,000 private warrants to purchase common stock outstanding held by two holders of record, and no public warrants, which were redeemed in April 2021.

Each private warrant is exercisable for one share of common stock at an exercise price of \$11.50 per share and such private warrants will be exercisable for cash or on a cashless basis, at the holder's option (except with respect to 500,000 of the private warrants held by Rosedale Park, LLC and 500,000 of the private warrants held by LifeSci Holdings LLC, which were amended to remove the cashless exercise provision), and will not be redeemable by us (except with respect to 500,000 of the private warrants held by LifeSci Holdings LLC, which were amended to remove the cashless exercise provision), and will not be LifeSci Holdings LLC, which were amended to remove the cashless exercise provision), and will not be redeemable by us (except with respect to 500,000 of the private warrants held by Rosedale Park, LLC and 500,000 of the private warrants held by LifeSci Holdings LLC, which were amended to include a redemption provision substantially identical to that of the public warrants; provided, however, that such redemption rights may not be exercised during the first 12 months following the closing of the business combination unless the last sales price of our common stock has been equal to or greater than \$20.00 per share for any 20 trading days within a 30-trading day period ending on the third business day prior to the date on which notice of redemption is given), in each case so long as they are still held by the initial purchasers or their affiliates.

The private warrants purchased by Rosedale Park, LLC will expire on March 5, 2025, provided that once the private warrants are no longer beneficially owned by Chardan Capital Markets, LLC or any of its related persons, the private warrants may not be exercised five years following the completion of our initial business combination.

The exercise price and number of shares of common stock issuable on exercise of the private warrants may be adjusted in certain circumstances including in the event of a share dividend, extraordinary dividend or recapitalization, reorganization, merger or consolidation. However, the private warrants will not be adjusted for issuances of common stock at a price below their respective exercise prices.

The private warrants may be exercised upon surrender of the warrant certificate on or prior to the expiration date at the offices of the warrant agent, with the exercise form on the reverse side of the warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price for the number of private warrants being exercised. The private warrant holders do not have the rights or privileges of holders of shares of common stock and any voting rights until they exercise their private warrants and receive shares of common stock. After the issuance of common stock upon exercise of the private warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

No private warrant will be exercisable for cash and we will not be obligated to issue shares of our common stock unless at the time a holder seeks to exercise such private warrant, a prospectus relating to the shares of common stock issuable upon exercise of the private warrants is current and the shares of common stock have been registered or qualified or deemed to be exempt under the securities laws of the state of residence of the holder of the warrants. Under the terms of the Warrant Agreement dated March 5, 2020 between LSAC and Continental Stock Transfer & Trust Company, we have agreed to use our best efforts to meet these conditions and to maintain a current prospectus relating to the shares of common stock issuable upon exercise of the private warrants until the expiration of the private warrants. If we do not maintain a current prospectus relating to the shares of common stock issuable upon exercise of the private warrants, holders will be unable to cash exercise their private warrants and we will not be required to cash settle any such warrant exercise.

Private warrant holders may elect to be subject to a restriction on the exercise of their private warrants such that an electing warrant holder would not be able to exercise their private warrants to the extent that, after giving effect to such exercise, such holder would beneficially own in excess of 9.9% of our outstanding common stock.

No fractional shares will be issued upon exercise of the private warrants. If, upon exercise of the warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, round down to the nearest whole number of shares of common stock to be issued to the warrant holder.

As described above, in connection with the business combination:

- \$500,000 of the promissory notes issued by LSAC to LifeSci Investments, LLC in the aggregate principal amount of \$1,000,000 was converted into private warrants to purchase shares of common stock at a conversion price of \$0.50 per private warrant, issued to LifeSci Holdings LLC.
- 500,000 of the private warrants held by Rosedale Park, LLC and 500,000 of the private warrants held by LifeSci Holdings LLC were amended to remove the cashless exercise provision and include a redemption provision substantially identical to that of the public warrants; provided, however, that such redemption rights may not be exercised during the first 12 months following the closing of the business combination unless the last sales price of common stock has been equal to or greater than \$20.00 per share for any 20 trading days within a 30-trading day period ending on the third business day prior to the date on which notice of redemption is given.

Warrants Issuable

The following is a summary of the general terms of the warrants we may offer and sell under this prospectus.

We may issue additional warrants for the purchase of debt securities, preferred stock, common stock, depositary shares, or any combination thereof. We may issue warrants independently or together with any other securities offered by any prospectus supplement and may be attached to or separate from the other offered securities. Each series of warrants may be issued under a separate warrant agreement to be entered into by us with a warrant agent. The applicable warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. Further terms of the warrants and the applicable warrant agreements will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement relating to any particular issue of warrants will describe the terms of the warrants, including, as applicable, the following:

- the title of the warrants;
- the aggregate number of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, terms and number of shares of debt securities, preferred stock or common stock purchasable upon exercise of the warrants;
- the designation and terms of the offered securities, if any, with which the warrants are issued and the number of the warrants issued with each offered security;
- the date, if any, on and after which the warrants and the related debt securities, preferred stock or common stock will be separately transferable;
- the price at which each share of debt securities, preferred stock or common stock purchasable upon exercise of the warrants may be purchased;

- the date on which the right to exercise the warrants shall commence and the date on which that right shall expire;
- the minimum or maximum amount of the warrants which may be exercised at any one time;
- information with respect to book-entry procedures, if any;

- a discussion of certain federal income tax considerations; and
- any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

We and the applicable warrant agent may amend or supplement the warrant agreement for a series of warrants without the consent of the holders of the warrants issued thereunder to effect changes that are not inconsistent with the provisions of the warrants and that do not materially and adversely affect the interests of the holders of the warrants.

DESCRIPTION OF RIGHTS

We may issue rights to purchase common stock or preferred stock. This prospectus and any accompanying prospectus supplement will contain the material terms and conditions for each right. The accompanying prospectus supplement may add, update or change the terms and conditions of the rights as described in this prospectus.

We will describe in the applicable prospectus supplement the terms and conditions of the issue of rights being offered, the rights agreement relating to the rights and the rights certificates representing the rights, including, as applicable:

- the title of the rights;
- the date of determining the stockholders entitled to the rights distribution;
- the title, aggregate number of shares of common stock or preferred stock purchasable upon exercise of the rights;
- the exercise price;
- the aggregate number of rights issued;
- the date, if any, on and after which the rights will be separately transferable;
- the date on which the right to exercise the rights will commence and the date on which the right will expire; and
- any other terms of the rights, including terms, procedures and limitations relating to the distribution, exchange and exercise of the rights.

Each right will entitle the holder of rights to purchase for cash the specific number of shares of common stock or preferred stock at the exercise price provided in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement. After the close of business on the expiration date, all unexercised rights will be void.

Holders may exercise rights as described in the applicable prospectus supplement. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the shares of common stock or preferred stock purchasable upon exercise of the rights. If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting arrangements, as described in the applicable prospectus supplement.

FORMS OF SECURITIES

Each debt security, depositary share, warrant and right will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Unless the applicable prospectus supplement provides otherwise, certificated securities will be issued in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the debt securities, depositary shares, warrants or rights represented by these global securities. The depositary maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Registered Global Securities

We may issue the registered debt securities, depositary shares, warrants and rights in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more registered global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by registered global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a registered global security may not be transferred except as a whole by and among the depositary for the registered global security, the nominees of the depositary or any successors of the depositary or those nominees.

If not described below, any specific terms of the depositary arrangement with respect to any securities to be represented by a registered global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a registered global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a registered global security, the depositary will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any underwriters, dealers or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a registered global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depositary, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in registered global securities.

So long as the depositary, or its nominee, is the registered owner of a registered global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the registered global security for all purposes under the applicable indenture, deposit agreement, warrant agreement or rights agreement. Except as described below, owners of beneficial interests in a registered global security:

- will not be entitled to have the securities represented by the registered global security registered in their names;
- will not receive or be entitled to receive physical delivery of the securities in definitive form; and
- will not be considered the owners or holders of the securities under the applicable indenture, deposit agreement, warrant agreement or rights agreement.

Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depositary for that registered global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, deposit agreement, warrant agreement or rights agreement.

We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any action that a holder is entitled to give or take under the applicable indenture, deposit agreement, warrant agreement or rights agreement, the depositary for the registered global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

We will make payments of principal, premium, if any, and interest, if any, on debt securities, and any payments to holders with respect to depositary shares, warrants or rights, represented by a registered global security registered in the name of a depositary or its nominee to the depositary or its nominee, as the case may be, as the registered owner of the registered global security. None of us, the trustees, the depositaries for depositary shares, the warrant agents, the rights agents or any other agent of ours, agent of the trustees, agent of such depositaries, agent of the warrant agents or agent of the rights agents will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a registered global security, upon receipt of any payment of principal, premium, interest or other distribution of underlying securities or other property to holders on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that registered global security as shown on the records of the depositary. We also expect that standing customer instructions and customary practices will govern payments by participants to owners of beneficial interests in a registered global security held through the participants, as is now the case with the securities held for the accounts of customers registered in "street name." We also expect that any of these payments will be the responsibility of those participants.

If the depositary for any of the securities represented by a registered global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Securities Exchange Act of 1934, or Exchange Act, and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depositary gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depositary's instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depositary that had been held by the depositary gives to the relevant gent.

PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus to one or more underwriters or dealers for public offering and sale by them or to investors directly or through agents. The accompanying prospectus supplement will set forth the terms of the offering and the method of distribution and will identify any firms acting as underwriters, dealers or agents in connection with the offering, including:

- the name or names of any underwriters, dealers or agents;
- the purchase price of the securities and the proceeds to us from the sale;
- any underwriting discounts and other items constituting compensation to underwriters, dealers or agents;
- any public offering price;
- · any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities offered in the prospectus supplement may be listed.

Only those underwriters identified in such prospectus supplement are deemed to be underwriters in connection with the securities offered in the prospectus supplement.

The distribution of the securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, or at prices determined as the applicable prospectus supplement specifies. The securities may be sold through an at the market offering, a rights offering, forward contracts or similar arrangements. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement, including in short sale transactions. If so, the third parties may sell securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

In connection with the sale of the securities, underwriters, dealers or agents may be deemed to have received compensation from us in the form of underwriting discounts or commissions and also may receive commissions from securities purchasers for whom they may act as agent. Underwriters may sell the securities to or through dealers, and the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions for the purchasers for whom they may act as agent.

We will provide in the applicable prospectus supplement information regarding any underwriting discounts or other compensation that we pay to underwriters or agents in connection with the securities offering, and any discounts, concessions or commissions that underwriters allow to dealers. Underwriters, dealers and agents participating in the securities distribution may be deemed to be underwriters, and any discounts, commissions or concessions they receive and any profit they realize on the resale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act of 1933. Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act. Some of the

underwriters, dealers or agents who participate in the securities distribution may engage in other transactions with, and perform other services for, us or our subsidiaries in the ordinary course of business.

Our common stock is currently listed on the Nasdaq Capital Market, but any other securities may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

LEGAL MATTERS

The validity of any securities offered by this prospectus will be passed upon for us by Pillsbury Winthrop Shaw Pittman LLP.

EXPERTS

The financial statements of Vincerx Pharma, Inc. as of December 31, 2020 and December 31, 2019, for the year ended December 31, 2020 and for the period from March 1, 2019 (inception) through December 31, 2019 that have been incorporated by reference into this prospectus and the registration statement have been audited by WithumSmith+Brown, PC, an independent registered public accounting firm, as set forth in their report incorporated by reference herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-3 with the SEC under the Securities Act of 1933. This prospectus is part of the registration statement but the registration statement includes and incorporates by reference additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information regarding companies, such as ours, that file documents electronically with the SEC. The address of that website is http://www.sec.gov.

We make available free of charge on our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and amendments to those reports, as soon as reasonably practicable after we electronically file or furnish such materials to the SEC. You may also obtain a free copy of these reports in the Investor Relations section of our website, www.vincerx.com. Information contained on our website or connected thereto does not constitute part of, and is not incorporated by reference into, this prospectus or the registration statement of which it forms a part.

The SEC permits us to "incorporate by reference" the information contained in documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus. Information that is incorporated by reference is considered to be part of this prospectus and you should read it with the same care that you read this prospectus. Later information that we file with the SEC will automatically update and supersede the information that is either contained, or incorporated by reference, in this prospectus, and will be considered to be a part of this prospectus from the date those documents are filed. We have filed with the SEC, and incorporate by reference in this prospectus:

- our Annual Report on Form 10-K/A for the year ended December 31, 2020;
- our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2021, June 30, 2021 and September 30, 2021;
- our Current Reports on Form 8-K filed with the SEC on January 11, 2021, February 17, 2021, April 5, 2021, April 20, 2021, May 5, 2021, May 13, 2021 and September 16, 2021; and
- the description of our common stock set forth in Exhibit 4.6 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, together with any amendment or report filed for the purpose of updating such description.

We also incorporate by reference all additional documents that we file with the SEC under the terms of Section 13(a), 13(c), 14 or 15(d) of the Exchange Act that are made after the initial filing date of the registration

statement of which this prospectus is a part and the effectiveness of the registration statement, as well as between the date of this prospectus and the termination of any offering of securities offered by this prospectus. We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

You may request a copy of any or all of the documents incorporated by reference but not delivered with this prospectus, at no cost, by writing or telephoning us at the following address and number: Vincerx Pharma, Inc., 260 Sheridan Avenue, Suite 400, Palo Alto, California 94306, telephone (650) 800-6676. We will not, however, send exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents.



Vincerx Pharma, Inc.

Up to \$30,000,000 Common Stock

PROSPECTUS SUPPLEMENT

H.C. Wainwright & Co

January 21, 2025