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

Amendment No. 1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

VIVUS, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	2834 (Primary Standard Industrial Classification Code Number)	94-3136179 (I.R.S. Employer Identification Number)
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**900 E. Hamilton Avenue, Suite 550
Campbell, CA 95008
(650) 934-5200**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Mark Oki
Senior Vice President, Chief Financial Officer and Chief Accounting Officer
VIVUS, Inc.

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Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to Be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
Common Stock, par value \$0.001 per share(2)(3)	\$175,000,000	\$22,715.00
Pre-funded warrants to purchase shares of common stock and shares of common stock issuable upon the exercise of pre-funded warrants(2)(3)	—	—
Warrants to purchase shares of common stock(2)	—	—
Placement Agent's warrants to purchase shares of common stock(2)(4)	\$13,125,000	\$1,703.63
Total	\$188,125,000	\$24,418.63(5)

- (1) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act").
- (2) Pursuant to Rule 416 under the Securities Act, the securities being registered hereunder include such indeterminate number of additional securities as may be issuable to prevent dilution resulting from stock splits, dividends or similar transactions.
- (3) The proposed maximum aggregate offering price of the common stock proposed to be sold in the offering will be reduced on a dollar-for-dollar basis based on the aggregate offering price of any pre-funded warrants offered and sold in the offering, and as such the proposed maximum aggregate offering price of the common stock and pre-funded warrants (and shares of common stock issuable upon the exercise of pre-funded warrants), if any, is \$175,000,000.
- (4) Represents warrants issuable to H.C. Wainwright & Co., LLC (the "Placement Agent's Warrants") to purchase a number of shares of common stock equal to 6.0% of the number of shares of common stock and pre-funded warrants being offered at an exercise price equal to 125% of the public offering price. Resales of the Placement Agent's Warrants on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 are registered hereby.
- (5) The registrant previously paid \$24,077.90 of such fee in connection with the initial filing of the registration statement.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated June 19, 2020

Preliminary Prospectus



154,867,256 Shares of Common Stock Pre-Funded Warrants to Purchase up to 154,867,256 Shares of Common Stock Warrants to Purchase up to 154,867,256 Shares of Common Stock

We are offering up to 154,867,256 shares of our common stock, par value \$0.001 per share, or the common stock, and warrants to purchase up to 154,867,256 shares of common stock, or the common warrants. Each common warrant will have an exercise price of \$ _____ per share, will not be exercisable until we receive stockholder approval of an amendment to our amended and restated certificate of incorporation to increase the number of shares of our authorized common stock so as to permit the exercise in full of the common warrants and such amendment has become effective, and will expire five years from the date on which the common warrants become exercisable. We are also offering to certain purchasers whose purchase of shares of common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock immediately following the consummation of this offering the opportunity to purchase, if any such purchaser so chooses, pre-funded warrants, in lieu of shares of common stock that would otherwise result in such purchaser's beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock. Each pre-funded warrant will be exercisable for one share of common stock and will be accompanied by a common warrant to purchase one share of common stock. The purchase price of each pre-funded warrant and the accompanying common warrant will be equal to the price at which a share of common stock and accompanying common warrant are sold to the public in this offering, minus \$0.001, and the exercise price of each pre-funded warrant will be \$0.001 per share. The pre-funded warrants will be immediately exercisable and may be exercised at any time until all of the pre-funded warrants are exercised in full. The shares of common stock and pre-funded warrants, on the one hand, and the accompanying common warrants, on the other hand, are immediately separable and will be issued separately, but can only be purchased together in this offering. This offering also relates to the shares of common stock issuable upon exercise of any pre-funded warrants sold in this offering.

Our common stock is listed on The Nasdaq Global Select Market, or Nasdaq, under the symbol "VVUS." On June 17, 2020, the last reported sale price of our common stock on Nasdaq was \$1.13 per share. There is no established trading market for the pre-funded warrants or common warrants, and we do not expect an active trading market to develop. We do not intend to apply to list the pre-funded warrants or common warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of these warrants will be limited.

You should read this prospectus, together with the additional information described under the headings "Incorporation of Certain Information by Reference" and "Where You Can Find Additional Information" carefully before you decide to invest in any of our securities.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 8 of this prospectus and in the documents incorporated by reference in this prospectus for a discussion of certain information that you should carefully consider in connection with an investment in our securities.

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.

	Per Share and Common Warrant	Per Pre-Funded Warrant and Common Warrant	Total
Public offering price	\$ _____	\$ _____	\$ _____
Placement Agent's fees(1)	\$ _____	\$ _____	\$ _____
Proceeds to us, before expenses(2)	\$ _____	\$ _____	\$ _____

- (1) We have agreed to reimburse H.C. Wainwright & Co., LLC, or the Placement Agent, for certain of its offering-related expenses, including a management fee of 1.0% of the gross proceeds raised in this offering. In addition, we have agreed to issue to designees of the Placement Agent or its affiliates warrants to purchase up to a number of shares of common stock equal to 6.0% of the number of the shares of common stock and pre-funded warrants sold in this offering at an exercise price equal to 125% of the public offering price of the common stock and related warrant. See "Plan of Distribution" for additional information and a description of the compensation payable to the Placement Agent.
- (2) We estimate the total expenses of this offering payable by us, excluding the Placement Agent's fees, will be approximately \$ _____.

We have engaged H.C. Wainwright & Co., LLC as our exclusive Placement Agent to use its reasonable best efforts to solicit offers to purchase the securities in this offering. The Placement Agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. The actual public offering amount, placement agent fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amounts set forth above. The securities are expected to be delivered to purchasers on or about _____, 2020.

H.C. Wainwright & Co.

The date of this prospectus is _____, 2020

TABLE OF CONTENTS

	<u>Page</u>
About This Prospectus	ii
Prospectus Summary	1
The Offering	5
Risk Factors	8
Special Note Regarding Forward-Looking Statements	16
Use of Proceeds	20
Dividend Policy	21
Capitalization	22
Dilution	24
Summary Financial Data	26
Principal Stockholders	27
Description of Capital Stock	30
Description of Securities We Are Offering	37
Plan of Distribution	41
Material U.S. Federal Income Tax Considerations	44
Legal Matters	52
Experts	52
Where You Can Find Additional Information	52
Incorporation of Certain Information by Reference	52

ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus and any free writing prospectus we authorize for use in connection with this offering. We have not, and the Placement Agent has not, authorized anyone to provide you with different information, and we and the Placement Agent take no responsibility for any other information others may give you. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the Placement Agent is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. The information appearing in this prospectus and any related free writing prospectus is accurate only as of the date on the front of the document and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or 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 are offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The distribution of this prospectus and the offering of the securities in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the common stock and warrants and the distribution of this prospectus outside the United States. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus by any person in any jurisdiction in which it is unlawful for the person to make the offer or solicitation.

This prospectus does not contain all of the information that is important to you. Before buying any of the securities that we are offering, you should carefully read this prospectus, all information incorporated by reference in this prospectus, any free writing prospectus we have authorized for use in connection with this offering and the additional information described under "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference." These documents contain information you should consider when making your investment decision.

To the extent that any statement that we make in this prospectus is inconsistent with statements made in any documents incorporated by reference, the statements made in this prospectus will be deemed to modify or supersede those made in those documents incorporated by reference. However, if any statement in one of these documents is inconsistent with a statement in another document having a later date and that is incorporated by reference in this prospectus, the statement in the document having the later date modifies or supersedes the earlier statement.

Unless otherwise indicated, information contained in this prospectus or the documents incorporated by reference in this prospectus concerning our industry and the markets in which we operate, including our general expectations and market position, market opportunity and market share, is based on information from our own management estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on that information and knowledge, which we believe to be reasonable. In addition, assumptions and estimates of our and our industry's future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described under the heading "Risk Factors" in this prospectus and in our [Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the Securities and Exchange Commission, or SEC, on March 3, 2020](#), as amended by [Amendment No. 1 to Annual Report on Form 10-K/A, filed with the SEC on April 29, 2020](#), and our [Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, filed with the SEC on May 5, 2020](#), which are incorporated by reference into this prospectus. These and

other important factors could cause our future performance to differ materially from our assumptions and estimates. See also "Special Note Regarding Forward-Looking Statements."

To the extent this prospectus or the documents incorporated by reference in this prospectus contain summaries of the documents referred to, you are directed to the actual documents for complete information. All of the summaries contained in this prospectus and the documents incorporated by reference in this prospectus are qualified in their entirety by the full text of the corresponding documents. Copies of the material agreements referred to in this prospectus have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part. You may review or obtain copies of those documents as described below under the section entitled "Where You Can Find Additional Information."

This prospectus contains references to a number of our trademarks that are registered or are subject to pending applications or to which we have common law rights. These include, but are not limited to, the following: VIVUS, Qsymia, Qsiva, PANCREASE, PANCREAZE, STENDRA and SPEDRA. Each trademark, trade name or service mark of any other company appearing in this prospectus or any related free writing prospectus belongs to its holder.

PROSPECTUS SUMMARY

This summary highlights certain information about us, this offering and other information contained elsewhere in or incorporated by reference into this prospectus. This summary is not complete, does not contain all of the information that you should consider before deciding whether to invest in our common stock and warrants, and is qualified in its entirety by the more detailed information in this prospectus and the information incorporated by reference in this prospectus. Before investing in our common stock and warrants, you should carefully read this entire prospectus, including our financial statements and the related notes and other documents incorporated by reference into this prospectus, and the risks and uncertainties described under "Risk Factors" in this prospectus beginning on page 8.

Except as otherwise indicated in this prospectus or as the context otherwise requires, references in this prospectus to "VIVUS," the "Company," "we," "us" and "our" refer to VIVUS, Inc., a Delaware corporation, and its wholly-owned subsidiaries.

Company Overview

We are a specialty pharmaceutical company with three approved therapies and one product candidate in clinical development:

- Qsymia® (phentermine and topiramate extended release) is approved by the U.S. Food and Drug Administration, or FDA, for chronic weight management. We commercialize Qsymia in the United States through a specialty sales force supported by an internal commercial team and license the commercial rights to Qsymia in South Korea.
- PANCREAZE®/PANCREAZE® MT (pancrelipase) is approved by the FDA and by Health Canada for the treatment of exocrine pancreatic insufficiency due to cystic fibrosis or other conditions. We commercialize PANCREAZE in the United States through a specialty sales force supported by an internal commercial team.
- STENDRA® (avanafil) is approved by the FDA for erectile dysfunction, or ED, and by the European Commission under the trade name SPEDRA, for the treatment of ED in the European Union. We license the commercial rights to STENDRA/SPEDRA in the United States, European Union and other jurisdictions.
- VI-0106 (tacrolimus) is in clinical development and is being studied in patients with pulmonary arterial hypertension.

In April 2018, we added John Amos as our Chief Executive Officer and a member of the VIVUS Board of Directors. With the addition of Mr. Amos, we announced a turnaround plan of building a portfolio of cash flow generating assets to leverage our expertise in commercializing specialty pharmaceutical assets. In June 2018, we completed the first acquisition under this strategy as we acquired all product rights for PANCREAZE (pancrelipase) in the United States and PANCREAZE MT in Canada for \$135.0 million in cash from Janssen Pharmaceuticals, Inc. PANCREAZE is a prescription medicine used to treat people who cannot digest food normally because their pancreas does not make enough enzymes due to cystic fibrosis or other conditions. We are supporting PANCREAZE in the U.S. market by leveraging our existing commercial infrastructure and 10 sales representatives in the United States focused on gastro-intestinal and cystic fibrosis physicians.

Restructuring Support Agreement and Refinancing our Debt

In addition to this offering, we are currently in negotiations regarding a potential debt financing. We intend to use the proceeds from this offering and any proceeds received from any potential debt financing to refinance existing indebtedness, including our Convertible Notes (as well as the reasonable fees and expenses of the sole holder of our Convertible Notes), as described below. We do not intend

to complete this offering if we are not able to raise an amount from this offering and from any debt financing sufficient to pay all amounts due under the Convertible Notes (as well as the note holder's reasonable fees and expenses) and, if required, the 2024 Notes (as defined below).

As of May 1, 2020, our outstanding debt consisted of \$170.2 million principal amount of our 4.50% convertible senior notes due May 1, 2020, or the Convertible Notes, and \$61.4 million principal amount of our 10.375% senior secured notes due June 30, 2024 (without giving effect to unamortized premium and debt issuance costs), or 2024 Notes. We do not currently have sufficient cash and/or credit facilities in place to pay the full outstanding principal amount of debt that became due May 1, 2020.

On April 29, 2020, we entered into an agreement with Icahn Enterprises Holdings L.P. (dba IEH Biopharma LLC), or IEH Biopharma, which held a principal amount of approximately \$170.2 million of the Convertible Notes as of that date. In accordance with the terms of the agreement, we paid IEH Biopharma \$3.8 million in accrued and unpaid interest on the Convertible Notes and IEH Biopharma granted us a grace period until June 1, 2020 for the repayment of the principal amount of the Convertible Notes during which the two parties were to work exclusively to attempt to restructure the outstanding principal amount of the Convertible Notes, subject to the terms and conditions contained therein. In addition, under the agreement, on May 1, 2020 we settled approximately \$11.4 million of outstanding principal amount of the Convertible Notes representing payment owed to all holders other than IEH Biopharma and approximately \$4 million representing all accrued and unpaid interest payable and due on that date to all holders including IEH Biopharma.

On May 31, 2020 we entered into a restructuring support agreement with IEH Biopharma as the sole holder of the Convertible Notes which, among other things, grants an extension of the grace period described above through July 13, 2020, subject to certain termination events.

Under the restructuring support agreement, we have until June 30, 2020 to complete a refinancing to pay in full all amounts due and owing under the Convertible Notes as well as IEH Biopharma's reasonable fees and expenses. If we are unable to complete the refinancing of the Convertible Notes by June 30, 2020, then pursuant to the terms of the restructuring support agreement, we will pursue a restructuring pursuant to a plan of reorganization and file petitions for voluntary relief under chapter 11 of the United States Bankruptcy Code on or before July 13, 2020. The terms of any such plan of reorganization will be consistent with the term sheet attached to the restructuring support agreement and remains subject to our filing of petitions for voluntary relief under the United States Bankruptcy Code, solicitation of votes, confirmation of the plan by the applicable bankruptcy court and other closing conditions. In connection with our entry into the restructuring support agreement, we paid \$1.0 million aggregate principal amount of the outstanding Convertible Notes, reducing the principal amount to \$169.2 million.

In addition to this offering, we are currently in negotiations regarding potential debt financing to refinance our existing indebtedness, including the Convertible Notes. If we incur additional indebtedness to refinance the Convertible Notes, we intend to repay the 2024 Notes, the terms of which restrict us from otherwise incurring such additional indebtedness. We do not intend to complete this offering if we are not able to raise an amount from this offering and any source of debt financing sufficient to pay all amounts due under the Convertible Notes, as well as IEH Biopharma's reasonable fees and expenses, and, if required, the 2024 Notes. However, we will not know until the completion of this offering the amount of proceeds we will receive through the issuance of securities in this offering and how much, if any, we will receive through the incurrence of debt. The issuance of common stock and warrants to purchase common stock in this offering will result in dilution to our existing stockholders and investors purchasing securities in this offering. The more common stock and warrants we issue, the greater the dilution will be to our existing stockholders and investors purchasing securities in this offering. The incurrence of indebtedness may subject our existing stockholders and investors purchasing securities in this offering to risks arising in connection with the debt that may then be

outstanding. Among other risks, lenders may be able to accelerate the debt obligations upon certain events of default. If repayment is accelerated, it would be unlikely that we would be able to repay the amounts then due under the indebtedness or our other outstanding indebtedness, including any interest.

Our independent registered public accounting firm's audit report on our consolidated financial statements set forth in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as amended by Amendment No. 1 to Annual Report on Form 10-K/A, includes an explanatory paragraph stating that there is substantial doubt about our ability to continue as a going concern. Our audited consolidated financial statements for the year ended December 31, 2019 and unaudited condensed consolidated financial statements for the quarter ended March 31, 2020 have been prepared assuming the Company will continue as a going concern. Our significant indebtedness that is currently due and matured as well as our negative cash flow from operations and accumulated deficit raise substantial doubt about our ability to continue as a going concern. The audited financial statements and unaudited condensed consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. Even if adequate funds become available, including through this offering, we may need to raise additional funds in the future to finance operations and pursue development and commercial opportunities.

Risks Associated with This Offering and Our Business

The securities offered in this offering, our business and our ability to execute our business strategy are subject to a number of risks of which you should be aware before you decide to purchase any of our common stock and warrants. In particular, you should consider the following risks, which are discussed more fully under the heading "Risk Factors" in this prospectus and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as amended, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, as well as the additional risks described under "Risk Factors."

- In addition to this offering, we also may need to complete a debt financing in connection with or following this offering to pay in full our Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) by June 30, 2020 in accordance with the terms of the restructuring support agreement with IEH Biopharma and, if required, our 2024 Notes. This debt might be on terms that are onerous to us and our stockholders.
- Even if we successfully pay all amounts due and owing under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) by June 30, 2020 and, if required, all amounts due and owing under the 2024 Notes, we might need to raise additional capital to fund the working capital requirements of our business and achieve our stated financial, strategic and other goals. This capital might not be available on acceptable terms or at all. We have a large accumulated deficit and a history of losses and our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.
- If we are unable to maintain compliance with the requirements of the Nasdaq Global Select Market ("Nasdaq"), our common stock might be delisted from Nasdaq and there might be other adverse consequences under our material agreements with lenders and other counterparties.
- The widespread domestic and global impact of the novel coronavirus (COVID-19) pandemic, including on our supply chain, distribution networks, sales force, customers, employees, and financial markets, could have a materially adverse effect on our business, financial condition and results of operations.
- We depend on sole-source suppliers, third parties and collaborative partners to successfully produce and distribute our products.

- We depend on licensed rights to Qsymia, PANCREAZE and STENDRA/SPEDRA. If we default on material obligations under those licenses, we could lose rights to these drugs.
- We are required to maintain ongoing compliance with regulatory obligations and restrictions, which may result in significant expense or limit our ability to commercialize our drugs.
- We are subject to the risk of litigation and related liabilities, including as a result of product liability claims or securities-related class action and shareholder litigation.
- Our stock price has been volatile and will continue to be volatile.
- Our success and sales depend on our ability and that of our current or future collaborators to effectively and profitably commercialize Qsymia, PANCREAZE and STENDRA/SPEDRA.
- The pursuit of the restructuring of our capital structure has consumed a substantial portion of the time and attention of our management, which may have a material adverse effect on our business and results of operations.

Corporate Information

Our principal executive offices are located at 900 E. Hamilton Avenue, Suite 550, Campbell, California 95008, and our telephone number is (650) 934-5200. Our corporate website is located at www.vivus.com. The information on our website is for informational purposes only and should not be relied upon in connection with making any decision with respect to an investment in our securities. We have included our website address in this prospectus solely as an inactive textual reference. Any information contained on, or that can be accessed through, our website is not incorporated by reference into, nor is it a part of, this prospectus or any document filed with the SEC. We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. You may obtain any of the documents filed by us with the SEC at no cost from the SEC's website at www.sec.gov.

Implications of Being a Smaller Reporting Company

We are a "smaller reporting company" as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act, and Rule 12b-2 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and have elected to take advantage of some of the scaled disclosure provisions available to smaller reporting companies in, among other public filings, the periodic and current reports we file with the SEC under the Exchange Act. This means that the market value of our stock held by non-affiliates is less than \$700 million and our annual revenue was less than \$100 million during our most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million. For so long as we remain a smaller reporting company, we are permitted, and intend to rely on, exemptions from certain disclosure and other requirements that are applicable to other public companies that are not smaller reporting companies. As a result, the information that we provide may be different than you might receive from other public reporting companies in which you hold equity interests.

THE OFFERING

Common stock offered by us in this offering 154,867,256 shares of common stock. Each share of common stock and accompanying common warrant are being sold together at a combined public offering price of \$.

Pre-funded warrants offered by us in this offering We are also offering to certain purchasers whose purchase of shares of common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock immediately following the consummation of this offering, the opportunity to purchase, if such purchasers so choose, pre-funded warrants to purchase shares of common stock, in lieu of shares of common stock that would otherwise result in any such purchaser's beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock. Each pre-funded warrant will be exercisable for one share of our common stock. The purchase price of each pre-funded warrant and accompanying common warrant will equal the price at which a share of common stock and accompanying common warrant are being sold to the public in this offering, minus \$0.001, and the exercise price of each pre-funded warrant will be \$0.001 per share. The pre-funded warrants will be immediately exercisable and may be exercised at any time until all of the pre-funded warrants are exercised in full.

For each pre-funded warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis.

This prospectus also relates to shares of our common stock issuable upon the exercise of pre-funded warrants.

Common warrants offered by us in this offering We are offering common warrants to purchase up to an aggregate of 154,867,256 shares of common stock accompanying each share of common stock or pre-funded warrant sold in this offering. Each common warrant is exercisable for one share of our common stock. Each common warrant will have an exercise price per share of common stock of \$, will be exercisable on or after the date of effectiveness of the Authorized Common Stock Increase and will expire on the fifth anniversary of the date on which the common warrants become exercisable. The common warrants will be immediately separable from each share of common stock or pre-funded warrant.

Common stock to be outstanding after this offering	172,734,953 shares, assuming the sale of the maximum number of shares of our common stock and no sales of pre-funded warrants, which, if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis and assuming none of the warrants issued in this offering are exercised. Assuming the exercise of all of the common warrants (which will not be exercisable until the date of effectiveness of the Authorized Common Stock Increase), there would be 327,602,209 shares of our common stock outstanding after this offering.
Use of proceeds	<p>We estimate that the net proceeds from this offering will be approximately \$160.5 million, assuming the sale of the maximum number of shares of stock offered in this offering at the combined assumed public offering price of \$1.13 per share of common stock and related warrant and assuming no sales of pre-funded warrants, after deducting estimated placement agent fees and estimated offering expenses payable by us, and assuming that none of the warrants issued in this offering are exercised in cash. However, because this is a best efforts offering, the actual offering amount, placement agent fees and net proceeds to us are not currently determinable and may be substantially less than the maximum amounts set forth on the cover page of this prospectus.</p> <p>We intend to use the proceeds from this offering and a potential debt financing to pay in full all amounts due and owing under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) in accordance with the terms of the restructuring support agreement with IEH Biopharma and, if required, our 2024 Notes. We currently intend to use any remaining proceeds from this offering for general corporate purposes, the funding of clinical trials, commercial expenses and research and development, including VI-0106 development. See "Use of Proceeds" for more information.</p>
Risk factors	An investment in our securities involves a high degree of risk. See "Risk Factors" beginning on page 8 of this prospectus and the other documents incorporated by reference into this prospectus for a discussion of certain information that you should carefully consider in connection with an investment in our securities.
Listing	Our common stock is listed on the Nasdaq Global Select Market under the symbol "VVUS." There is no established trading market for the pre-funded warrants or common warrants, and we do not expect an active trading market to develop. We do not intend to apply to list the pre-funded warrants or common warrants on any securities exchange or nationally recognized trading system. Without an active trading market, the liquidity of these warrants will be limited.

The number of shares of our common stock that will be outstanding after this offering is based on 17,867,697 shares of our common stock outstanding as of June 1, 2020 and excludes:

- 3,096,628 shares of common stock issuable upon the exercise of stock options outstanding as of June 1, 2020 at a weighted average exercise price of approximately \$16.60 per share;
- 88 shares of common stock issuable upon vesting of restricted stock units outstanding as of June 1, 2020;
- 540,459 shares of common stock reserved for future issuance under our equity incentive plan as of June 1, 2020 (excluding shares of our common stock issuable upon the exercise of outstanding stock options and shares of our common stock subject to restricted stock awards shown above);
- 398,327 shares of common stock reserved for future issuance under our employee stock purchase plan as of June 1, 2020;
- 1,270,125 shares of common stock issuable upon exercise of outstanding warrants as of June 1, 2020 at a weighted-average exercise price of approximately \$3.27 per share; and
- 164,159,291 shares of our common stock issuable upon exercise of the common warrants offered in this offering and the warrants to be issued as compensation to the Placement Agent, or placement agent's warrants.

Unless otherwise stated, all information in this prospectus, including this section captioned "The Offering," assumes:

- no exercise of our outstanding stock options or warrants into shares of common stock;
- no vesting of the outstanding restricted stock units described above; and
- no exercise of the common warrants, the pre-funded warrants or the placement agent's warrants.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the following risks and uncertainties as well as the risks and uncertainties described in the section entitled "Risk Factors" contained in our Annual Report on [Form 10-K for the year ended December 31, 2019](#), as amended, and our Quarterly Report on [Form 10-Q for the quarter ended March 31, 2020](#), as well as in our subsequent quarterly and annual reports filed with the SEC, which descriptions are incorporated in this prospectus by reference in their entirety. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not currently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described below or in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. In that case, the trading price of our common stock could decline and you could lose all or part of your investment. You should carefully consider the following information about risks, together with the other information contained in this prospectus, before making an investment in our common stock.

RISKS RELATING TO OUR COMMON STOCK, OUR WARRANTS AND THIS OFFERING

Even if this offering and any potential debt financing are successful, we may require substantial additional capital in the future, which may not be available on acceptable terms or at all. If we are unable to raise additional capital when needed, we may be forced to delay, reduce and/or eliminate one or more of our commercialization initiatives, research and development programs, or other operations.

Even if this offering and any potential debt financing are successful and we refinance our existing indebtedness, we may require substantial additional capital in the future for working capital, debt service, research and development and other needs. Accordingly, we may need to obtain substantial additional funding to maintain our continuing operations. We may attempt to raise additional funds through various sources, including the offering of additional equity securities or the incurrence of debt. Our ability to raise additional capital may be adversely impacted by potential adverse domestic or global economic conditions or disruptions to and volatility in the credit and financial markets, including those resulting from the ongoing COVID-19 pandemic. If we are unable to raise capital when needed or on acceptable terms, we may be forced to delay, reduce or eliminate one or more of our commercialization initiatives, research and development programs, market expansion or commercial partnership opportunities, or other operations. In addition, we may be unable to execute our growth strategy, and operating results may be adversely affected and potentially curtail operations.

This is a best efforts offering. We may not raise the amount of capital we believe is required to pay all amounts due under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) and, if required, our 2024 Notes, and we may need to incur substantial indebtedness in order to raise sufficient capital.

The Placement Agent has agreed to use its reasonable best efforts to solicit offers to purchase the securities in this offering. The Placement Agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. Placement Agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth above. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us. Accordingly, we may need to raise additional funds through debt financing, which may not be available or may not be available on terms acceptable to us. We do not intend to complete this offering if we are not able to raise an amount of funds from this offering and any other financing sources sufficient to pay all amounts due under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) and, if required, our 2024 Notes.

If you purchase shares of common stock in this offering, you will experience immediate and substantial dilution in your investment.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer immediate and substantial dilution with respect to the net tangible book value of the common stock you purchase in this offering. Based on the combined assumed public offering price of \$1.13 per share of common stock and accompanying warrant being sold in this offering, which is the last reported sale price of our common stock on Nasdaq on June 17, 2020, assuming no sale of any pre-funded warrants and after deducting discounts and commissions and estimated offering expenses payable by us, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$1.29 per share with respect to the net tangible book value of the common stock. See the section entitled "Dilution" for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

Our stock price has been and is expected to continue to be volatile.

The market price of our common stock has been volatile and is likely to continue to be volatile. In addition, our common stock can trade in small volumes which may make the price of our stock highly volatile. The last reported price of our common stock may not represent the price at which you would be able to buy or sell shares of our common stock. The market prices for the stock of companies comparable to us have been highly volatile. Often, the market prices for the stock of companies comparable to us have experienced significant price and volume fluctuations for reasons that may be related or unrelated to the operating performance of the individual companies. In addition, like our common stock, securities of publicly traded companies generally and in the biotechnology and life science sectors in particular have experienced significant volatility, including for reasons that may be unrelated to the operating performance of the individual companies. Factors giving rise to the past or current and expected future volatility of our common stock may include:

- our ability to refinance our Convertible Notes and other indebtedness and comply with the terms of the restructuring support agreement with IEH Biopharma;
- the widespread domestic and global impact of the COVID-19 pandemic, including on our customers, suppliers and other counterparties, employees, and financial markets;
- our ability and that of our collaboration partners to meet the expectations of investors related to the production and commercialization of Qsymia, PANCREAZE and STENDRA/SPEDRA;
- our ability to meet the expectations of investors related to the commercialization of the VIVUS Healthcare Platform;
- our ability to obtain marketing authorization for our products in foreign jurisdictions, including authorization from the European Commission for Qsymia in the European Union;
- the costs, timing and outcome of post-approval clinical studies which FDA has required us to perform as part of the approval for Qsymia;
- the cost required to maintain the Risk Evaluation and Mitigation Strategy program for Qsymia;
- results within the clinical trial programs for Qsymia or other results or decisions affecting the development of our investigational drug candidates;
- announcements of technological innovations or new products by us or our competitors;
- approval of, or announcements of, other anti-obesity compounds in development;
- publication of generic drug combination weight loss data by outside individuals or companies;
- actual or anticipated fluctuations in our financial results;

- our ability to obtain needed financing;
- sales by insiders or major stockholders;
- economic conditions in the United States and abroad;
- the volatility and liquidity of the financial markets;
- comments by or changes in assessments of us or financial estimates by security analysts;
- negative reports by the media or industry analysts on various aspects of our products, our performance and our future operations;
- the status of the cardiovascular outcomes trial (CVOT) with respect to Qsymia and our related discussions with FDA;
- adverse regulatory actions or decisions;
- any loss of key management;
- deviations in our operating results from the estimates of securities analysts or other analyst comments;
- discussions about us or our stock price by the financial and scientific press and in online investor communities;
- trading activity by highly technical investors utilizing sophisticated algorithms and high frequency trading;
- investment activities employed by short sellers of our common stock;
- developments or disputes concerning patents or other proprietary rights;
- reports of prescription data by us or from independent third parties for our products;
- licensing, product, patent or securities litigation; and
- public concern as to the safety or efficacy of our drugs or future investigational drug candidates developed by us.

The factors and fluctuations described above, as well as domestic and global macroeconomic, political and other market conditions, including those related to the COVID-19 pandemic, may adversely affect the market price of our common stock. Additionally, volatility or a lack of positive performance in our stock price may adversely affect our ability to retain or recruit key employees, all of whom have been or will be granted equity awards as an important part of their compensation packages.

Our warrants are expected to become exercisable for shares of our common stock, which would increase the number of shares eligible for future resale in the public market and result in substantial dilution to stockholders.

Each common warrant offered in this offering entitles the holder to purchase one share of our common stock, subject to adjustment, and is expected to become exercisable following our receipt of stockholder approval, if any, of an amendment to our amended and restated certificate of incorporation, or certificate of incorporation, to increase the number of shares of our authorized common stock so as to permit the exercise in full of the common warrants and placement agent's warrants and such amendment has become effective. To the extent such warrants are exercised, additional shares of common stock will be issued, which will result in dilution to the then existing holders of shares of our common stock and increase the number of shares eligible for resale in the public market. Sales of substantial numbers of shares in the public market could adversely affect the market price of our shares of common stock, among other effects.

If we issue additional shares of common stock in the future, you may experience immediate and substantial dilution and our stock price may decline.

We may from time to time issue additional shares of common stock, or securities convertible into, exchangeable or exercisable for shares of common stock, including at a discount from the current market price of our common stock. Any sales of additional shares, without regard to the price of the shares sold, will result in additional dilution to our stockholders, including investors who purchase shares of common stock (or pre-funded warrants) and accompanying warrants in this offering, and may result in a significant decline in the price of our common stock. We also cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. Investors would experience immediate dilution upon the purchase of any shares of our common stock sold at a discount. In addition, the exercise of outstanding stock options and warrants by the holders of those options and warrants and the vesting of outstanding restricted stock units may result in further dilution of your investment.

You will be unable to exercise the common warrants unless we receive stockholder approval and file an amendment to our certificate of incorporation.

The common warrants issued in this offering will not be exercisable unless we receive stockholder approval of an amendment to our certificate of incorporation to increase the number of shares of our authorized common stock so as to permit the exercise in full of the common warrants and placement agent's warrants and such amendment has become effective. The common warrants will expire five years from the date on which the common warrants become exercisable.

Following the completion of this offering, we expect to file a proxy statement for the solicitation of stockholder approval to amend our certificate of incorporation to increase the number of authorized shares of common stock to permit the exercise in full of the common warrants and placement agent's warrants. If we do not obtain stockholder approval for the increase in our number of authorized shares of common stock, the common warrants and placement agent's warrants will not be exercisable. In such a case, we intend, on a future date, to continue to solicit stockholder approval for the increase the number of authorized shares of common stock.

There is no public market for the warrants being offered in this offering.

There is no established public trading market for the pre-funded warrants or common warrants being offered in this offering, and we do not expect an active trading market to develop. In addition, we do not intend to apply to list the pre-funded warrants or common warrants on Nasdaq, any other securities exchange or any nationally recognized trading system. Without an active trading market, the liquidity of the pre-funded warrants and common warrants will be limited.

Future sales of our common stock, or the possibility that such sales could occur, could adversely affect the market price of our common stock.

Future sales in the public market of shares of our common stock, including shares we may offer in the future, as referred to in the foregoing risk factors, or shares issued upon exercise of stock options or warrants, or the perception by the market that these sales could occur, could lower the market price of our common stock or make it difficult for us to raise additional capital.

Fluctuations in our operating results could adversely affect the price of our common stock.

Our operating results may fluctuate significantly on a quarterly and annual basis and are difficult to predict. Our operating expenses are largely independent of sales in any particular period. We believe

that our quarterly and annual results of operations may be negatively affected by a variety of factors. Some of the factors include, but are not limited to, the level of patient demand for Qsymia and PANCREAZE, the ability of our distribution partners to process and ship product on a timely basis, the success of our third-party's manufacturing efforts to meet customer demand, fluctuations in foreign exchange rates, investments in sales and marketing efforts to support the sales of Qsymia and STENDRA/SPEDRA, investments in the research and development efforts, and expenditures we may incur to acquire additional products. Period-to-period comparisons of our historical and future financial results may not be meaningful, and investors should not rely on them as an indication of future performance. Our fluctuating results may fail to meet the expectations of securities analysts or investors. If one or more of the analysts who cover us downgrade our stock, or if our results of operations do not meet their expectations, the trading price of our stock could decline.

Holders of warrants purchased in this offering will have no rights as common stockholders until such holders exercise such warrants and acquire our common stock.

Until holders of pre-funded warrants or common warrants acquire shares of our common stock upon exercise of such warrants (in the case of the common warrants, after these warrants have become exercisable), holders of pre-funded warrants or common warrants will have no rights with respect to the shares of our common stock underlying such warrants. Upon exercise of the pre-funded warrants or common warrants, the holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

Because we have not paid dividends on our common stock since our inception and may never pay dividends, you will benefit from an investment in our common stock only if our common stock appreciates in value.

We have not paid any dividends on our common stock since our inception. We do not intend to declare or pay any dividends on our common stock in the foreseeable future and may never pay dividends. In addition, certain of our financing arrangements place restrictions on, and any future financing arrangements may further limit or prohibit, our ability to pay dividends. Any return to stockholders will therefore be limited to the appreciation in value of any shares of our common stock they may own.

Significant holders or beneficial holders of our common stock may not be permitted to exercise pre-funded warrants or common warrants that they hold.

The pre-funded warrants and common warrants being offered hereby will prohibit a holder from exercising its pre-funded warrants or common warrants if doing so would result in such holder (together with such holder's affiliates and any other persons acting as a group together with such holder or any of such holder's affiliates) beneficially owning more than 4.99% of our common stock outstanding immediately after giving effect to the exercise, provided that, at the election of a holder and notice to us, such beneficial ownership limitation as to such holder shall be up to 9.99% of our common stock outstanding immediately after giving effect to the exercise. As a result, if you hold a significant amount of our securities, you may not be able to exercise your pre-funded warrants or common warrants for shares of our common stock, in whole or in part, at a time when it would be financially beneficial for you to do so.

The pre-funded warrants in this offering are speculative in nature.

The pre-funded warrants in this offering do not confer any rights of ownership of our common stock on their holders, but rather merely represent the right to acquire shares of our common stock at a fixed price. In addition, following this offering, the market value of the pre-funded warrants, if any, is uncertain and there can be no assurance that the market value of the pre-funded warrants will equal or

exceed their imputed offering price. The pre-funded warrants will be not listed or quoted for trading on any market or exchange.

RISKS RELATING TO OUR INDEBTEDNESS, RESTRUCTURING AND FINANCIAL CONDITION

We may incur substantial additional indebtedness in connection with or following the closing of this offering. Holders of our new and existing debt obligations will have priority over the holders of our common stock with respect to payment in the event of liquidation, dissolution or winding up and with respect to dividends. Such indebtedness could negatively affect the value of our common stock.

We are currently in negotiations to refinance our existing debt and we may incur substantial additional indebtedness in connection with or following the closing of this offering. We do not intend to complete this offering if we are not able to raise a sufficient amount from this offering and any potential debt financing to pay all amounts due under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) and, if required, our 2024 Notes. However, we will not know until the completion of this offering how much we will raise through the issuance of common stock and warrants to purchase common stock and how much we will raise through the incurrence of indebtedness. We expect that, following the completion of this offering and any potential debt offering, we may have outstanding more than \$125 million in aggregate indebtedness even after we pay our Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) and our 2024 Notes. If we incur such additional indebtedness, our existing stockholders and investors purchasing securities in this offering will be subject to risks arising in connection with such a substantial amount of indebtedness that may then be outstanding (including those described below). Our incurrence of indebtedness could negatively affect the market price of our common stock.

Moreover, upon certain events of default under the terms of our existing and contemplated agreements and indentures governing our indebtedness, debt holders could exercise their rights under such agreements to accelerate the obligations thereunder. If repayment is accelerated, it would be unlikely that we would be able to repay the total then-outstanding amounts of indebtedness, including any interest.

If we are unable to pay our debt when due, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional debt or equity capital on terms that may be onerous or highly dilutive. Our ability to restructure or refinance our indebtedness will depend on the condition of the capital markets and our financial condition at such time. We may not be able to undertake any of these alternatives or engage in these activities on acceptable terms, which could result in a default on our debt obligations.

In addition, in the event of our insolvency or liquidation, holders of our common stock will not be entitled to receive any payment or other distribution of assets until after all of our obligations to our debt holders have been satisfied and holders of our debt have received any payments and other distributions due to them.

If we complete a debt financing that we might enter into in connection with or following this offering, we will have a substantial amount of debt, which could adversely affect our business and financial position and, among other things, our ability to raise additional capital our ability to satisfy our financial obligations.

If we complete a potential debt financing in connection with or following this offering, we will have a substantial amount of debt, which could adversely affect, among other things, our business and financial position, our ability to raise additional capital, and our ability to satisfy our financial

obligations. Accordingly, the impact of the indebtedness may include, but may not be limited to, the following:

- make it difficult for us to satisfy our financial obligations, including with respect to any such indebtedness;
- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions, or other general business purposes;
- require us to use a substantial portion of our cash flow from operations to make debt service payments instead of other purposes, thereby reducing the amount of cash flow available for future working capital, capital expenditures, acquisitions, or other general business purposes;
- limit our flexibility to plan for, or react to, changes in our business and industry;
- place us at a competitive disadvantage compared with our less-leveraged competitors;
- increase our vulnerability to the impact of adverse economic, competitive, and industry conditions; and
- increase our cost of borrowing.

In addition, we expect that the agreements governing our potential debt financing will contain restrictive covenants that may limit our ability to engage in activities that may be in our long-term best interest. Our failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all of our indebtedness outstanding after the completion of this offering and any debt financing. Furthermore, we may be able to incur substantial additional indebtedness in the future. If new indebtedness is added to our indebtedness outstanding after the completion of this offering and any debt financing, the risks relating to indebtedness that we will face could intensify.

We may not be able to successfully refinance our debt, and if we are not able to repay our debt in full by June 30, 2020, our restructuring support agreement provides that existing stockholders will receive a pro rata cash payment and lose their entire equity interest in the Company.

We do not intend to complete this offering if we are not able to raise an amount of funds from this offering and any other financing sources sufficient to pay all amounts due under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) and, if required, the 2024 Notes. However, if we are not able to complete the refinancing of the Convertible Notes by June 30, 2020, then pursuant to the terms of the restructuring support agreement, we will pursue a restructuring pursuant to a plan of reorganization and file petitions for voluntary relief under chapter 11 of the United States Bankruptcy Code on or before July 13, 2020, as described below.

On April 29, 2020, we entered into an agreement with Icahn Enterprises Holdings L.P. (dba IEH Biopharma LLC), or IEH Biopharma, which held a principal amount of approximately \$170.2 million of the Convertible Notes. In accordance with the terms of the agreement, we paid IEH Biopharma \$3.8 million in accrued and unpaid interest on the Convertible Notes and IEH Biopharma granted us a 30-day grace period for the repayment of the principal amount of the Convertible Notes during which the two parties were to work exclusively to attempt to restructure the outstanding principal amount of the Convertible Notes. In addition, under the agreement, we settled approximately \$11 million of outstanding principal amount of the Convertible Notes owed to all holders other than IEH Biopharma and approximately \$4 million representing all accrued and unpaid interest payable and due on that date to all holders including IEH Biopharma.

On May 31, 2020 we entered into a restructuring support agreement with IEH Biopharma as the sole holder of the Convertible Notes which, among other things, grants an extension of the grace

period described above through July 13, 2020, subject to certain termination events. Under the agreement, we have until June 30, 2020 to complete a refinancing to pay in full in cash all amounts due and owing under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses). In addition, we will continue to work with IEH Biopharma on an exclusive basis in respect of any restructuring, financing or other material transaction concerning us or our assets, other than such refinancing.

In accordance with the terms of the restructuring support agreement, if we are unable to pay in full all amounts due under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) on or before June 30, 2020, we and IEH Biopharma will exclusively pursue, on or before July 13, 2020, an in court plan of reorganization consistent with the restructuring term sheet agreed to as part of the restructuring support agreement. The plan of reorganization remains subject to our filing of petitions for voluntary relief under the United States Bankruptcy Code, solicitation of votes, confirmation of the plan by the applicable bankruptcy court and other closing conditions. In the event certain conditions are satisfied under the plan of reorganization, our existing stockholders will receive (1) a *pro rata* share of \$5 million and (2) a non-transferable contractual contingent value right to earn another \$2 per share if certain financial milestones are met in 2021 and 2022. Additionally, IEH Biopharma will take 100% ownership of VIVUS.

We have a history of losses and our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.

As of March 31, 2020, our accumulated deficit was approximately \$917.2 million and our cash and cash equivalents were \$32.9 million, which does not include net proceeds from a registered direct offering of our common stock completed in April 2020 in the amount of approximately \$10.5 million. Even if we successfully restructure or refinance our existing debt obligations, we expect to continue to incur operating and net losses for the foreseeable future. Our independent registered public accounting firm's audit report on our consolidated financial statements set forth in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as amended, includes an explanatory paragraph stating that there is substantial doubt about our ability to continue as a going concern. Although our financial statements raise substantial doubt about our ability to continue as a going concern, they do not reflect any adjustments that might result if we are unable to continue our business. If we cannot continue as a viable entity, our stockholders may lose some or all of their investment in our company. Even if a financial restructuring or refinancing is consummated, whether by means of an out-of-court agreement or restructuring or an in-court restructuring, we will continue to face a number of risks, including our ability to repay our remaining debt, implement our strategic initiatives and bring our products to market. Accordingly, we cannot guarantee that the proposed financial restructuring will achieve our stated goals nor can we give any assurance of our ability to continue as a going concern. As a result of the substantial doubt about our ability to continue as a going concern, investors or other financing sources may be unwilling to provide additional funding to us on commercially reasonable terms or at all.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference into this prospectus may contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act about VIVUS, Inc. These forward-looking statements are intended to be covered by the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995. Forward-looking statements are not guarantees of future performance and are not statements of historical fact. Forward looking statements can generally be identified in this prospectus by the use of forward-looking words such as "believes", "expects", "may", "will", "could", "should", "projects", "plans", "goal", "targets", "potential", "estimates", "pro forma", "seeks", "intends" or "anticipates" or the negative of these words or comparable expressions. Forward-looking statements include discussions of strategy, financial projections, guidance and estimates (including their underlying assumptions), statements regarding plans, objectives, expectations or consequences of various transactions, and statements about the future performance, operations, products and services of VIVUS, Inc. We caution our stockholders and other readers not to place undue reliance on these statements. The risks and uncertainties that may affect the operations, performance, development, and results of our business include but are not limited to:

Risks and uncertainties related to our business, indebtedness, restructuring and financial condition:

- our ability to refinance our Convertible Notes and other indebtedness and comply with the terms of the restructuring support agreement with IEH Biopharma and to address our liquidity and capital resource needs;
- the widespread domestic and global impact of the COVID-19 pandemic on our business, results of operations, customers, suppliers and other counterparties, and employees;
- our history of losses and variable quarterly results;
- our ability to continue as a going concern;
- the volatility and liquidity of the financial markets;
- our expected future revenues, operations and expenditures;
- our ability to effectively manage expenses;
- risks related to our ability to protect our intellectual property and litigation in which we are involved or may become involved;
- uncertainties of government or third-party payor reimbursement;
- our reliance on sole-source suppliers, third parties and our collaborative partners;
- our ability to successfully develop or acquire a proprietary formulation of tacrolimus;
- risks related to the failure to obtain or retain federal or state-controlled substances registrations and noncompliance with Drug Enforcement Administration ("DEA") or state-controlled substances regulations;
- risks related to the failure to obtain FDA or foreign authority clearances or approvals and noncompliance with FDA or foreign authority regulations;
- our ability to demonstrate through clinical testing the quality, safety, and efficacy of our current and future investigational drug candidates or approved products;
- the timing of initiation and completion of clinical trials and submissions to U.S. and foreign authorities;

- compliance with post-marketing regulatory standards, post-marketing obligations or pharmacovigilance rules is not maintained;
- our ability to execute on our business strategy to enhance enterprise and long-term stockholder value;
- our ability to identify and acquire cash flow generating assets and opportunities;
- our ability to successfully navigate recent changes to our Board of Directors and the senior management team;
- other factors that are described from time to time in our periodic filings with the SEC including those set forth in Part II, Item 1A., "Risk Factors," of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 and Part II, Item 1A., "Risk Factors," of our Form 10-K for the fiscal year ended December 31, 2019, as amended;

Risks and uncertainties related to Qsymia® (phentermine and topiramate extended release):

- our, or our current or potential partners', ability to successfully commercialize Qsymia including risks and uncertainties related to expansion to direct to patient distribution, the broadening of payor reimbursement, the expansion of Qsymia's primary care presence, and the outcomes of our discussions with pharmaceutical companies and our strategic and franchise-specific pathways for Qsymia;
- our ability to sell through the Qsymia retail pharmacy network and the Qsymia Advantage program;
- the impact of promotional programs for Qsymia on our net product revenue and operating results in future periods;
- our ability to ensure that the entire supply chain for Qsymia timely, efficiently and consistently delivers Qsymia to our customers and partners;
- our ability to accurately forecast Qsymia demand;
- our ability to maintain the relationship with the sole manufacturer for Qsymia;
- our, or our current or potential partners', ability to successfully seek, gain and maintain approval for Qsymia in territories outside the United States;
- our dialogue with certain Concerned Member States (as defined below) in Europe relating to the pending decentralized Marketing Authorization Application, the timing and scope of the assessment by such Concerned Member State health authorities of our Marketing Authorization Application, and ultimately the decision of such Concerned Member State health authorities on whether to grant Marketing Authorization for Qsymia in such EU countries;
- the timing of and costs associated with the initiation and completion of the post-approval clinical studies required as part of the approval of Qsymia by the FDA;
- the response from FDA to any data and/or information relating to post-approval clinical studies required for Qsymia;
- our ability to work with FDA to significantly reduce or remove the requirements of the cardiovascular outcomes trial;
- the impact of the indicated uses and contraindications contained in the Qsymia label and the Risk Evaluation and Mitigation Strategy requirements;

- the impact of any possible future requirement to provide additional clinical data or further analysis of previously submitted clinical trial data;

Risks and uncertainties related to PANCREAZE (pancrelipase):

- risks and uncertainties related to the timing, strategy, tactics and success of the marketing and sales of PANCREAZE;
- our ability to successfully maintain and increase market share against current competing products and potential competitors that may develop alternative formulations of the drug;
- our ability to expand payor coverage for PANCREAZE;
- our ability to accurately forecast PANCREAZE demand;
- our ability to maintain the relationship with the sole manufacturer for PANCREAZE;
- our ability to maintain a satisfactory level of PANCREAZE inventory;
- the ability of our partners to maintain regulatory approvals to manufacture and adequately supply our products to meet demand;

Risks and uncertainties related to STENDRA® (avanafil) or SPEDRA™ (avanafil):

- our ability to manage the supply chain for STENDRA/SPEDRA for our current or potential commercial collaborators;
- our partner's ability to find a new distribution partner or model for STENDRA in the United States, Canada, South America and India;
- risks and uncertainties related to the timing, strategy, tactics and success of the launches and commercialization of STENDRA/SPEDRA by our current or potential collaborators;
- our ability to successfully complete, on acceptable terms and on a timely basis, avanafil partnering discussions for territories under our license with Mitsubishi Tanabe Pharma Corporation in which we do not have a commercial collaboration partner;
- Sanofi Chimie's ability to manufacture the avanafil active pharmaceutical ingredient and Sanofi Winthrop Industrie's ability to manufacture avanafil tablets; and
- the ability of our partners to maintain regulatory approvals to manufacture and adequately supply our products to meet demand or to comply with the terms of their agreements with us.

You should read this prospectus and the documents incorporated by reference completely and with the understanding that our actual future results may be materially different from what we currently expect. Our business and operations are and will be subject to a variety of risks, uncertainties and other factors. Consequently, actual results and experience may materially differ from those contained in any forward-looking statements. These risks, uncertainties and other factors that could cause actual results and experience to differ from those projected include, but are not limited to, the risk factors set forth under the caption "Risk Factors" in our [Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the SEC on March 3, 2020](#), as amended by [Amendment No. 1 on Form 10-K/A as filed with the SEC on April 29, 2020](#), our [Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, as filed with the SEC on May 5, 2020](#) and elsewhere in the documents incorporated by reference into this prospectus.

You should assume that the information appearing in this prospectus, any related free writing prospectus and any document incorporated herein by reference is accurate as of its date only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those

expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made.

New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. All written or oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the risk factors and cautionary statements contained in and incorporated by reference into this prospectus. Unless legally required, we do not undertake any obligation to release publicly any revisions to these forward-looking statements to reflect events or circumstances after the date of this prospectus or to reflect the occurrence of unanticipated events.

USE OF PROCEEDS

Assuming the maximum number of shares offered in this offering are sold, we estimate that our net proceeds from this offering will be approximately \$160.5 million based on an assumed public offering price of \$1.13 per share of our common stock and related warrant, the last reported sale price of our common stock on the Nasdaq Global Select Market on June 17, 2020, after deducting estimated placement agent fees and estimated offering expenses payable by us, and further assuming no sales of pre-funded warrants and that none of the warrants issued in this offering are exercised in cash. However, because this is a best efforts offering, Placement Agent's fees and net proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth on the cover page of this prospectus.

We intend to use the proceeds from this offering and any potential debt financing to pay in full all amounts due and owing under the Convertible Notes (as well as IEH Biopharma's reasonable fees and expenses) in accordance with the terms of the restructuring support agreement with IEH Biopharma and, if required, the 2024 Notes. We currently intend to use any remaining proceeds from this offering for general corporate purposes, the funding of clinical trials, commercial expenses and research and development, including VI-0106 development. As of June 1, 2020, we had outstanding (1) \$170.2 million aggregate face amount of our Convertible Notes, which bear interest at a rate of 4.5% and matured on May 1, 2020, subject to a grace period which terminates on July 13, 2020 pursuant to the terms of the restructuring support agreement, and (2) \$61.4 million aggregate face amount of our 2024 Notes, which bear interest at a rate of 10.375% and mature on June 30, 2024.

Pending the use of proceeds from this offering as described above, we plan to invest the net proceeds we receive in this offering in short-term and intermediate-term interest-bearing obligations, investment-grade investments, certificates of deposit, or direct or guaranteed U.S. government obligations.

DIVIDEND POLICY

Common stockholders are entitled to receive dividends declared by the board of directors out of funds legally available for the payment of dividends, subject to the rights, if any, of preferred stockholders and applicable contractual restrictions. We have not paid any dividends since our inception, and we do not intend to declare or pay any dividends on our common stock in the foreseeable future. Declaration or payment of future dividends, if any, will be at the discretion of our Board of Directors after taking into account various factors, including, but not limited to, our financial condition, operating results and current and anticipated cash needs.

CAPITALIZATION

The following table sets forth our cash and cash equivalents capitalization as of March 31, 2020, derived from our unaudited condensed consolidated financial statements included in our Quarterly Report on [Form 10-Q for the quarter ended March 31, 2020](#), which is incorporated by reference in this prospectus:

- on an actual basis;
- on a pro forma basis to reflect the sale of 7,218,750 shares of our common stock subsequent to March 31, 2020 as a result of our registered direct offering of our common stock that closed on April 3, 2020 in addition to the payment of \$7.5 million to settle \$11.3 million of convertible notes on April 30, 2020 and the payment of \$1.0 million principal amount of our Convertible Notes to IEH Biopharma on June 2, 2020 in connection with our entry into the restructuring support agreement; and
- on a pro forma as adjusted basis to give effect to our issuance and sale of the maximum of 154,867,256 shares of our common stock in this offering at the assumed public offering price of \$1.13 per share and accompanying common warrant, which is the last reported sale price of our common stock on the Nasdaq Global Select Market on June 17, 2020, assuming the sale of the maximum offering amount and no sales of pre-funded warrants, which, if sold, would reduce the number of shares of our common stock that we are offering on a one-for-one basis, and after deducting the estimated Placement Agent fees and estimated offering expenses payable by us, and the application of proceeds therefrom.

The pro forma as adjusted information below is illustrative only and our capitalization following the completion of this offering is subject to adjustment based on the actual public offering price of our common stock and related warrant and other terms of this offering determined at pricing. The pro forma as adjusted information below is unaudited and reflects estimates by our management.

The information in this table below should be read together with, and is qualified by reference to, the sections entitled "Summary Financial Data" and "Description of Capital Stock" in this prospectus and our financial statements and related notes included in our Annual Report on [Form 10-K for the year ended December 31, 2019](#), as amended, and our Quarterly Report on [Form 10-Q for the quarter ended March 31, 2020](#), which are incorporated by reference in this prospectus.

	As of March 31, 2020 (in thousands, except share and per share amounts)		
	Actual	Pro Forma	Pro Forma, As Adjusted(1)
Cash and cash equivalents	\$ 32,854	\$ 34,772	\$ 195,319
Total current liabilities	227,786	215,272	215,272
Long-term debt	58,910	58,910(2)	58,910
Convertible Notes	181,822	169,165	169,561
Total liabilities	289,864	277,350(2)	277,350
Stockholders' equity:			
Common stock, par value \$0.001 per share, 200,000 shares authorized, 10,649 shares issued and outstanding	11	18	173
Additional paid-in capital	843,146	853,606	1,013,998
Accumulated deficit	(917,221)	(913,256)	(913,256)
Total stockholders' (deficit) equity	(73,956)	(59,524)	101,023
Total capitalization	\$ 215,908	\$ 217,826	\$ 378,373

- (1) Each \$0.10 increase (decrease) in the assumed public offering price of \$1.13 per share and accompanying common warrant, which is the last reported sale price of our common stock on the

Nasdaq Global Select Market on June 17, 2020, would increase (decrease) the as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by approximately \$14.2 million, assuming that the maximum number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and no sale of any pre-funded warrants, and after deducting estimated Placement Agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the cash exercise of the common warrants issued in this offering.

- (2) As disclosed in our Form 10-Q for the quarter ended March 31, 2020, on May 4, 2020, we received a \$1.25 million loan through the Paycheck Protection Program under the Coronavirus Aid, Relief, and Economic Security Act. On June 1, 2020, we provided our authorization for the repayment of this loan. The withdrawal of these funds by the relevant lending institution is expected to occur within the near future, at which time the loan will be repaid in full.

The table above is based on 10,648,947 shares of common stock outstanding as of March 31, 2020, and excludes the following, all of which, if issued by us, would be dilutive to our stockholders:

- 3,220,158 shares of common stock issuable upon the exercise of stock options outstanding under our equity incentive plan as of March 31, 2020, at a weighted average exercise price of approximately 16.18 per share;
- 88 shares of our common stock subject to restricted stock unit awards outstanding as of March 31, 2020;
- 524,160 shares of our common stock reserved for issuance under our equity incentive plans as of March 31, 2020 (excluding shares of our common stock issuable upon the exercise of outstanding stock options and shares of our common stock subject to restricted stock awards shown above);
- 398,327 shares of common stock reserved for future issuance under our employee stock purchase plan as of March 31, 2020;
- 837,000 shares of our common stock issuable upon exercise of outstanding warrants as of March 31, 2020 at a weighted-average exercise price of approximately \$3.92 per share; and
- 164,159,291 shares of our common stock issuable upon exercise of the common warrants offered in this offering and the placement agent's warrants.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the combined public offering price per share of our common stock and accompanying common warrant and the as adjusted net tangible book value per share of our common stock immediately after the closing of this offering.

Our historical net tangible book value as of March 31, 2020 was \$(189.8) million, or \$(17.83) per share of common stock. Our historical net tangible book value represents the amount of our total tangible assets less our total liabilities. Historical net tangible book value per common share is our historical net tangible book value divided by the total number of shares of common stock outstanding as of March 31, 2020. Pro forma net tangible book value as of March 31, 2020 was approximately \$(175.4) million, or \$(9.82) per share of common stock, after giving effect to the sale of 7,218,750 shares of common stock subsequent to March 31, 2020 in our registered direct offering that closed on April 3, 2020 in addition to the payment of \$7.5 million to settle \$11.3 million of convertible notes on April 30, 2020 and the payment of \$1.0 million principal amount of our Convertible Notes to IEH Biopharma on June 2, 2020 in connection with our entry into the restructuring support agreement. Net tangible book value dilution per share to new investors represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the as adjusted net tangible book value per share of common stock immediately after completion of this offering.

After giving effect to the sale of shares of our common stock and accompanying common warrants in this offering at an assumed combined public offering price of \$1.13 per share, which was the last reported sale price of our common stock on The Nasdaq Global Select Market on June 17, 2020, assuming the sale of the maximum offering amount, and after deducting estimated Placement Agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the common warrants issued in this offering, our pro forma as adjusted net tangible book value as of March 31, 2020 would have been \$(27.4) million, or \$(0.16) per share of common stock. This amount represents an immediate increase in pro forma as adjusted net tangible book value of \$9.66 per share to our existing stockholders and an immediate dilution in the pro forma as adjusted net tangible book value of \$1.29 per share to investors purchasing securities in this offering.

The following table illustrates this dilution on a per share basis to new investors:

Assumed combined public offering price per share and accompanying common warrant	<u>\$ 1.13</u>
Pro forma net tangible book value per share as of March 31, 2020, before giving effect to this offering	<u>\$ (9.82)</u>
Increase in pro forma as adjusted net tangible book value per share of common stock attributable to existing investors in this offering	<u>\$ 9.66</u>
Pro forma as adjusted net tangible book value per share as of March 31, 2020, after giving effect to this offering	<u>\$ (0.16)</u>
Dilution in net tangible book value per share to new investors in this offering	<u>\$ 1.29</u>

The pro forma as adjusted dilution information discussed above is illustrative only and will change based on the actual public offering price, the actual number of shares and common warrants that we offer in this offering, and other terms of this offering, in each case as determined at pricing. Each \$0.10 increase (decrease) in the assumed combined public offering price of \$1.13 per share and accompanying common warrant, which was the last reported sale price of our common stock on The Nasdaq Global Select Market on June 17, 2020, would increase (decrease) the as-adjusted net tangible book value per share by \$0.08 per share and the dilution per share to new investors purchasing

securities in this offering by \$0.02 per share, assuming that the maximum number of shares and accompanying common warrants offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated Placement Agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the common warrants issued in this offering.

We may also increase or decrease the number of shares we are offering. A 1 million share increase or decrease in the maximum number of shares and accompanying common warrants offered by us, as set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us by \$1.0 million, increase or decrease the as adjusted net tangible book value per share after this offering by \$0.01 and increase or decrease the dilution per share to new investors purchasing securities in this offering by \$0.01, assuming the combined public offering price of \$1.13 per share and accompanying common warrant, which was the last reported sale price of our common stock on The Nasdaq Global Select Market on June 17, 2020, remains the same, and after deducting estimated Placement Agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the common warrants issued in this offering.

The discussion and table above assume no sale of pre-funded warrants, which, if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis. The table and discussion above are based on 10,648,947 shares of common stock outstanding as of March 31, 2020, and exclude the following, all of which, if issued by us, would be dilutive to our stockholders:

- 3,220,158 shares of common stock issuable upon exercise of stock options outstanding as of March 31, 2020 under our equity incentive plan at a weighted average exercise price of approximately \$16.18 per share;
- 88 shares of common stock issuable upon vesting of restricted stock units outstanding as of March 31, 2020;
- 524,160 shares of our common stock reserved for issuance under our equity incentive plan as of March 31, 2020 (excluding shares of our common stock issuable upon the exercise of outstanding stock options and shares of our common stock subject to restricted stock awards shown above);
- 398,327 shares of common stock reserved for future issuance under our employee stock purchase plan as of March 31, 2020;
- 837,000 shares of our common stock issuable upon exercise of outstanding warrants as of March 31, 2020 at a weighted-average exercise price of approximately \$3.92 per share; and
- 164,159,291 shares of our common stock issuable upon exercise of the common warrants offered in this offering and the placement agent's warrants.

To the extent that outstanding options or warrants are exercised, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

SUMMARY FINANCIAL DATA

The summary statement of operations data for the years ended December 31, 2019 and 2018 and the summary balance sheet data as of December 31, 2019 and 2018 are derived from our audited financial statements appearing in our [Annual Report on Form 10-K for the year ended December 31, 2019](#), as amended, which is incorporated by reference in this prospectus. The summary statement of operations data for the three months ended March 31, 2020 and 2019 and the summary balance sheet data as of March 31, 2020 and 2019 are derived from our unaudited financial statements appearing in our Quarterly Report on Form 10-Q for the quarterly periods ended [March 31, 2020](#) and 2019, which are incorporated by reference in this prospectus. Our historical results are not necessarily indicative of our results in any future period and results from our interim period may not necessarily be indicative of the results of the entire year.

You should read the following summary financial data together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and our financial statements and the related notes in our [Annual Report on Form 10-K for the year ended December 31, 2019](#), as amended, and our Quarterly Reports on Form 10-Q for the quarterly periods ended [March 31, 2019](#) and [2020](#), which are incorporated by reference in this prospectus. The summary financial data in this section is not intended to replace our financial statements and the related notes and are qualified in their entirety by the financial statements and related notes described in the preceding sentence.

	Year ended December 31,		Three Months Ended March 31	
	2019	2018	2020	2019
Total revenue	\$ 69,760	\$ 65,062	\$ 19,631	\$ 16,146
Operating expenses				
Cost of Goods Sold	\$ 15,671	\$ 14,613	\$ 4,627	\$ 4,308
Research and development	\$ 10,467	\$ 7,347	\$ 2,445	\$ 2,469
General and administrative	\$ 22,071	\$ 23,971	\$ 6,727	\$ 5,284
Impairment of property and equipment	—	—	—	—
Total operating expenses	\$ 80,729	\$ 68,541	\$ 21,670	\$ 20,233
Interest income (expense)	\$ 20,728	\$ 33,876	*	*
Other income (expense)	\$ (215)	\$ 970	*	*
Provision for income taxes	\$ 21	\$ 52	(45)	(8)
Net loss	\$ (31,503)	\$ (36,950)	\$ (5,258)	\$ (7,949)
Net loss per share				
Basic and diluted	\$ (2.96)	\$ (3.48)	\$ (0.49)	\$ (0.75)

	Year ended December 31,		Three Months Ended March 31	
	2019	2018	2020	2019
Balance Sheet Data:				
Cash and cash equivalents	\$ 32,659	\$ 30,411	\$ 32,854	\$ 23,021
Working capital	\$ (128,346)	\$ 124,327	\$ (129,932)	\$ 118,755
Total assets	\$ 218,308	\$ 302,147	\$ 215,908	\$ 290,183
Convertible note	—	—	—	—
Long-term debt	\$ 58,721	\$ 294,446	\$ 58,910	\$ 293,396
Total liabilities	\$ 287,532	\$ 342,170	\$ 289,264	\$ 337,428
Convertible preferred stock	—	—	—	—
Accumulated deficit	\$ (912,008)	\$ (880,515)	\$ (917,221)	\$ (888,454)
Total stockholders' (deficit) equity	\$ (69,224)	\$ (40,023)	\$ (73,956)	\$ (47,245)

* Not presented in our unaudited condensed consolidated financial statement.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information known to us with respect to beneficial ownership of our common stock as of June 1, 2020 by (i) each person or entity who is known by us to own beneficially more than 5% of our common stock; (ii) each of our directors; (iii) each of our named executive officers; and (iv) all directors and executive officers as a group.

The percentage ownership information shown in the column titled "Percent Before Offering" in the table is based on 17,867,697 shares of common stock outstanding as of June 1, 2020. The percentage ownership information shown in the column titled "Percent After Offering" in the table is based on a total of 172,734,953 shares of our common stock outstanding, assuming the sale of the maximum of 154,867,256 shares of our common stock and accompanying common warrants by us and no sale of any pre-funded warrants in this offering.

The calculation of beneficial ownership is determined in accordance with SEC rules. Under such rules, a person is deemed to be a "beneficial owner" of a security if that person has or shares the power to vote or direct the voting of the security or the power to dispose or direct the disposition of the security. Beneficial ownership as of any date includes any shares as to which a person has the right to acquire voting or investment power as of such date or within 60 days thereafter through the exercise of any stock options, restricted stock units or warrants held by that person, without regard to whether such right expires before the end of such 60-day period or continues thereafter. Those shares, however, are not deemed outstanding for the purpose of computing the percentage ownership of any other person. Consequently, the denominator used for calculating such percentage may be different for each beneficial owner.

The following table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G, if any, filed with the SEC. Unless otherwise noted, the business address of the persons or entities shown in the table is 900 E. Hamilton Avenue, Suite 550, Campbell, California 95008.

Name of Beneficial Owner	Common Stock(1)		
	Number	Percent Before Offering	Percent After Offering
5% Holders			
Sabby Management, LLC(2)	1,781,250	9.97%	1.0%
Steven Chlavin(3)	1,025,000	5.7%	*
Non-Employee Directors			
Karen Ferrell(4)	28,125	*	*
Edward A. Kangas(5)	28,125	*	*
Thomas B. King(6)	114,167	*	*
David Y. Norton(7)	52,500	*	*
Jorge Plutzky, M.D.(8)	57,839	*	*
Herman Rosenman(9)	60,357	*	*
Named Executive Officers			
John P. Amos(10)	473,787	2.7%	*
Mark K. Oki(11)	110,783	*	*
John L. Slebir(12)	210,036	1.2%	*
Santosh T. Varghese, M.D.(13)	168,039	*	*
Kenneth Suh(14)	384,475	2.2%	*
M. Scott Oehrlein(15)	92,026	*	*
All directors and executive officers as a group (12 persons)(16)	1,780,260	9.8%	1.0%

* Less than 1%

- (1) Based on information furnished by the beneficial owners in SEC filings or otherwise, the persons named in this table have sole voting and investment power with respect to all shares of Common Stock shown as beneficially owned by them, subject to community property laws, where applicable, and except as indicated in the other footnotes to this table.
- (2) Beneficial ownership information is based on a Schedule 13G filed with the SEC on April 1, 2020. Sabby Management, LLC and its affiliates (the "Sabby Management Entities") report that Sabby Management, LLC, Sabby Volatility Warrant Master Fund, Ltd. (the "Master Fund") and Hal Mintz beneficially own, and have shared voting and dispositive power over, an aggregate of 1,781,250 shares of Common Stock. The Sabby Management Entities further report that (a) Sabby Management, LLC, a Delaware limited liability company, and Mr. Mintz do not directly own any shares of Common Stock, but each indirectly owns 1,781,250 shares of Common Stock, (b) Sabby Management, LLC indirectly owns 1,781,250 shares of Common Stock because it serves as the investment manager of the Master Fund, a Cayman Islands company, and (c) Mr. Mintz indirectly owns 1,781,250 shares of Common Stock in his capacity as manager of Sabby Management, LLC. The address of the Master Fund is 89 Nexus Way, Camana Bay, Grand Cayman KY1-9007, Cayman Islands, the address of Sabby Management, LLC is 10 Mountainview Road, Suite 205, Upper Saddle River, New Jersey 07458 and the address of Mr. Mintz is c/o Sabby Management, LLC, 10 Mountainview Road, Suite 205, Upper Saddle River, New Jersey 07458.
- (3) Beneficial ownership information is based on a Schedule 13G filed with the SEC on February 4, 2020. Mr. Chlavin reports that he beneficially owns, and has sole voting and dispositive power over, 1,025,000 shares of Common Stock. The address of Steven Chlavin is 9663 Santa Monica Blvd., Suite 214, Beverly Hills, California, 90210.
- (4) Consists of 28,125 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.

- (5) Consists of 28,125 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (6) Consists of 114,167 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (7) Consists of 52,500 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (8) Consists of (i) 5,339 shares of Common Stock and (ii) 52,500 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (9) Consists of (i) 12,357 shares of Common Stock, (ii) 500 shares of Common Stock Mr. Rosenman is deemed to beneficially own that are held in an Individual Retirement Account for the benefit of Mr. Rosenman, (iii) 5,000 shares of Common Stock Mr. Rosenman is deemed to beneficially own that are held by his spouse, and (iv) 42,500 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (10) Consists of (i) 170,850 shares of Common Stock, (ii) 203,437 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020, and (iii) 99,500 warrants to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (11) Consists of (i) 12,100 shares of Common Stock and (ii) 98,683 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (12) Consists of (i) 13,209 shares of Common Stock and (ii) 196,827 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (13) Consists of (i) 8,869 shares of Common Stock and (ii) 159,170 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (14) Consists of (i) 169,375 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020, and (ii) 215,100 warrants to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (15) Consists of (i) 68,126 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020, and (ii) 23,900 warrants to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.
- (16) Includes (i) 1,213,535 options to purchase shares of Common Stock exercisable within 60 days of June 1, 2020 and (ii) 338,500 warrants to purchase shares of Common Stock exercisable within 60 days of June 1, 2020.

DESCRIPTION OF CAPITAL STOCK

The following descriptions of our capital stock (including the common stock, \$0.001 par value per share (the "common stock"), of VIVUS, Inc.), the rights (the "Rights") to purchase specified units of the Series A Participating Preferred Stock, \$0.001 par value per share, of VIVUS, Inc. (the "Series A Participating Preferred Stock") and the Rights Agreement (as defined below) are summaries and are subject to, and are qualified in their entirety by reference to, the provisions of (1) our Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation"), (2) our Amended and Restated Bylaws, as further amended (the "Bylaws"), (3) our Amended and Restated Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of the Company and (4) the Preferred Stock Rights Agreement, dated as of December 30, 2019, between the Company and Computershare Trust Company, N.A. (the "Rights Agreement"), copies of which are incorporated by reference as Exhibits 3.1, 3.2, 3.3 and 4.3, respectively, to our [Annual Report on Form 10-K for the year ended December 31, 2019](#), as amended.

Capital Stock

Our Certificate of Incorporation authorizes us to issue a total of 205,000,000 shares of capital stock, consisting of (1) 200,000,000 shares of common stock, and (2) 5,000,000 shares of preferred stock, \$0.001 par value per share (the "preferred stock").

Common Stock

Voting Rights

The holders of shares of our common stock are entitled to one vote per share on all matters to be voted on by stockholders. Directors are elected by a plurality of the votes cast by stockholders present in person or represented by proxy at a meeting of the stockholders of the Company and entitled to vote on the election of directors. Except as otherwise provided by applicable law, our Certificate of Incorporation or our Bylaws, every matter other than the election of directors will be decided by the affirmative vote of a majority of the votes cast by stockholders present in person or represented by proxy at the meeting and entitled to vote on such matter. Except as otherwise provided in our Certificate of Incorporation or as required by applicable law, holders of shares of our common stock are not entitled to cumulate their votes in the election of directors or with respect to any matter submitted to a vote of the stockholders.

Dividends

The holders of our common stock are entitled to receive dividends declared by our Board of Directors (the "Board") out of funds legally available for the payment of dividends under Delaware law, subject to the rights, if any, of the holders of our preferred stock. In addition, our debt financing arrangements currently impose limitations, and debt financing or other contractual arrangements may in the future impose limitations, on our ability to pay dividends.

Liquidation

Upon any liquidation, dissolution or winding up of our business, the holders of common stock are entitled to share equally in all assets available for distribution after payment of all liabilities and provision for liquidation preference of shares of preferred stock then outstanding.

Rights and Preferences

The holders of our common stock have no preemptive rights and no rights to convert their common stock into any other securities. There are also no redemption or sinking fund provisions

applicable to our common stock. All outstanding shares of common stock are fully paid and nonassessable. In addition, see "Anti-Takeover Effects of Provisions of Our Certificate of Incorporation, Bylaws, Other Agreements and Delaware Law" below.

Listing

Our common stock is traded on The Nasdaq Global Select Market under the trading symbol "VVUS."

Preferred Stock

Our Board has the authority, without further action by our stockholders, to issue up to 5,000,000 shares of our preferred stock, each with a par value of \$0.001 per share, in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our Company or other corporate action.

Our Board has adopted the Amended and Restated Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of VIVUS, Inc. setting forth the rights, powers and preferences of our Series A Participating Preferred Stock, as described below. In addition, we have issued Rights to purchase specified units of Series A Participating Preferred Stock. For more information about the Rights, see "Rights to Purchase Series A Participating Preferred Stock."

In addition, see "Anti-Takeover Effects of Provisions of Our Certificate of Incorporation, Bylaws, Other Agreements and Delaware Law" below.

Series A Participating Preferred Stock

Amount

Under the Amended and Restated Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock, we may issue 700,000 shares of Series A Participating Preferred Stock.

Ranking

The Series A Participating Preferred Stock will rank junior to all other series of the Company's preferred stock as to the payment of dividends and the distribution of assets, unless the terms of any such series provide otherwise.

Proportional Adjustment

In the event that the Company shall at any time after the issuance of any share or shares of Series A Participating Preferred Stock (i) declare any dividend on common stock payable in shares of common stock, (ii) subdivide the outstanding common stock or (iii) combine the outstanding common stock into a smaller number of shares, then in each such case the Company shall simultaneously effect a proportional adjustment to the number of outstanding shares of Series A Participating Preferred Stock.

Dividend Rights

Subject to the prior and superior right of the holders of any shares of any series of preferred stock ranking prior and superior to the shares of Series A Participating Preferred Stock with respect to dividends, the holders of shares of Series A Participating Preferred Stock will be entitled to receive when, as and if declared by the Board out of funds legally available for the purpose, quarterly dividends payable in cash on the last day of March, June, September and December in each year (referred to as a "Quarterly Dividend Payment Date"), commencing on the first Quarterly Dividend Payment Date after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock, in an amount per share (rounded to the nearest cent) equal to 1,000 times the aggregate per share amount of all cash dividends, and 1,000 times the aggregate per share amount (payable in kind) of all non-cash dividends or other distributions other than a dividend payable in shares of common stock or a subdivision of the outstanding shares of common stock (by reclassification or otherwise), declared on the common stock since the immediately preceding Quarterly Dividend Payment Date, or, with respect to the first Quarterly Dividend Payment Date, since the first issuance of any share or fraction of a share of Series A Participating Preferred Stock.

We will be required to declare a dividend or distribution on the Series A Participating Preferred Stock as provided in the preceding paragraph immediately after we declare a dividend or distribution on the common stock (other than a dividend payable in shares of common stock).

Dividends will begin to accrue on outstanding shares of Series A Participating Preferred Stock from the Quarterly Dividend Payment Date first following the date of issue of such shares of Series A Participating Preferred Stock, unless the date of issue of such shares is prior to the record date for the first Quarterly Dividend Payment Date, in which case dividends on such shares will begin to accrue from the date of issue of such shares, or unless the date of issue is a Quarterly Dividend Payment Date or is a date after the record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive a quarterly dividend and before such Quarterly Dividend Payment Date, in either of which events such dividends will begin to accrue from such Quarterly Dividend Payment Date. Accrued but unpaid dividends will not bear interest. Dividends paid on the shares of Series A Participating Preferred Stock in an amount less than the total amount of such dividends at the time accrued and payable on such shares will be allocated pro rata on a share-by-share basis among all such shares at the time outstanding.

Voting Rights

Each share of Series A Participating Preferred Stock will entitle the holder thereof to 1,000 votes on all matters submitted to a vote of the stockholders of the Company. Except as otherwise provided herein or by law, the holders of shares of Series A Participating Preferred Stock and the holders of shares of common stock will vote together as one class on all matters submitted to a vote of stockholders of the Company.

Certain Restrictions on Dividends

Whenever quarterly dividends or other dividends or distributions payable on the Series A Participating Preferred Stock as described above are in arrears, the Company will be restricted in its ability to declare or pay dividends on, redeem or purchase or otherwise acquire for consideration, or make other distributions of shares of stock ranking junior to, or on parity with, the Series A Participating Preferred Stock (subject to specified exceptions for stock ranking on a parity with the Series A Participating Preferred Stock). In such event, the Company will also be restricted in its ability to purchase shares of Series A Participating Preferred Stock.

Distribution Upon Liquidation of Dissolution

Upon any liquidation, dissolution or winding up of the Company, the holders of shares of Series A Participating Preferred Stock will be entitled to receive an aggregate amount per share equal to 1,000 times the aggregate amount to be distributed per share to holders of shares of common stock plus an amount equal to any accrued and unpaid dividends on such shares of Series A Participating Preferred Stock.

Exchange Upon Consolidation or Merger

In the event the Company enters into any consolidation, merger, combination or other transaction in which the shares of our common stock are exchanged for or changed into other stock or securities, cash and/or any other property, then the shares of Series A Participating Preferred Stock must at the same time be similarly exchanged or changed in an amount per share equal to 1,000 times the aggregate amount of stock, securities, cash and/or any other property (payable in kind), as the case may be, into which or for which each share of common stock is changed or exchanged.

Rights and Redemption

The shares of Series A Participating Preferred Stock will not be redeemable. There is also no sinking fund provision applicable to our Series A Participating Preferred Stock.

Amendments

Our Certificate of Incorporation may not be amended in any manner which would materially alter or change the powers, preference or special rights of the Series A Participating Preferred Stock so as to affect them adversely without the affirmative vote of the holders of a majority of the outstanding shares of Series A Participating Preferred Stock, voting separately as a series.

Rights to Purchase Series A Participating Preferred Stock

We are a party to the Rights Agreement, dated as of December 30, 2019, with Computershare Trust Company, N.A. On December 30, 2019, our Board authorized and declared a dividend distribution of one Right, initially representing the right to purchase one one-thousandth (0.001) of a share of our Series A Participating Preferred Stock, for each share of our common stock outstanding on January 13, 2020 to the stockholders of record at the close of business on that date. As of December 31, 2019, there were no Rights outstanding, and as of January 13, 2020, there were 10,648,947 Rights outstanding.

We expect to submit the Rights Agreement to a vote at our 2020 annual meeting of stockholders. If our stockholders do not approve the Rights Agreement at the 2020 annual meeting, it will expire at the close of business on the following day.

Exercise of Rights

Prior to the Distribution Date (as defined below), the Rights are not exercisable. On or after the Distribution Date, each Right would initially entitle the holder to purchase one one-thousandth (0.001) of a share of the Series A Participating Preferred Stock for a purchase price of \$12.68 (subject to adjustment) (the "Purchase Price"). Under certain circumstances set forth in the Rights Agreement, the Company may suspend the exercisability of the Rights.

The "Distribution Date" means the earlier of (1) the close of business on the tenth business day after the Stock Acquisition Date (as defined below), or (2) the close of business on the tenth business day (or such later date as the Board determines prior to the time at which any person becomes an Acquiring Person) after the date that a tender or exchange offer by any person (other than any

"Exempt Person" (as defined below) is first published, sent or given within the meaning of applicable Securities and Exchange Commission rules, if on the completion of the tender or exchange offer, that person, or any affiliate or associate of that person, would become an Acquiring Person.

Definition of "Acquiring Person"

An "Acquiring Person" is a person (including a legal entity) or group that, together with affiliates and associates of such person or group, acquires beneficial ownership of 4.9% or more of the shares of common stock then outstanding, other than, generally: (A) the Company, its subsidiaries and their respective employee benefit plans or any person or entity organized, appointed or established by the Company for or pursuant to the terms of any such plan; (B) any stockholder that, as of the time of the first public announcement of approval of the Rights Agreement, beneficially owns 4.9% or more of the shares of common stock then outstanding, unless such person thereafter acquires an additional 1% of the outstanding shares of common stock, subject to certain exceptions (including pursuant to a dividend or distribution paid or made by the Company on the outstanding common stock or pursuant to a split or subdivision of the outstanding common stock); (C) a person who becomes an Acquiring Person solely as a result of the Company repurchasing shares of common stock or a stock dividend, stock split, reverse stock split or similar transaction effected by the Company (unless and until such person acquires additional shares, other than in certain specified exempt transactions); (D) certain stockholders who inadvertently or without knowledge of the terms of the Rights, becomes Acquiring Persons and who thereafter reduce the percentage of shares owned below 4.9%; (E) investment advisors to mutual funds, to the extent that such advisor does not hold and no single fund advised by such advisor holds 4.9% or more of the Company's outstanding common stock, and (F) any person whose beneficial ownership of common stock is determined by the Board not to be inconsistent with the purpose of the Rights Agreement.

For purposes of the Rights Agreement, "Exempt Person" generally means a person (including a legal entity) identified in clauses (A), (E) or (F) in the definition of "Acquiring Person" above.

Flip-In

In the event that any person or group becomes an Acquiring Person, each holder of a Right will thereafter have the right to receive, upon exercise, common stock (or, in certain circumstances, cash, property or other securities of the Company), having a value equal to two times the exercise price of the Right. The exercise price is the Purchase Price times the number of units associated with each Right (initially, one). Notwithstanding any of the foregoing, following the occurrence of an Acquiring Person becoming such, all Rights that are, or (under certain circumstances specified in the Rights Agreement) were, beneficially owned by any Acquiring Person or its affiliates and associates and certain transferees thereof will be null and void.

Exchange

At any time following the (1) first date on which there is a public announcement by the Company or an Acquiring Person that an Acquiring Person has become an Acquiring Person or (2) any earlier date on which at least a majority of our Board becomes aware of the existence of an Acquiring Person (the "Stock Acquisition Date") but before the time the Acquiring Person becomes the beneficial owner of 50% or more of the outstanding shares of common stock, the Board may, at its option, exchange the Rights (other than Rights owned by such person or group which have become void), in whole or in part, for common stock at an exchange ratio of one share of common stock per Right (subject to adjustment); provided, that no holder is entitled to receive pursuant to such exchange common stock that would result in a beneficial ownership of more than 4.9% of the common stock then outstanding.

Term and Expiration

The Rights and the Rights Agreement will expire on the earliest of (i) December 30, 2022, (ii) the time at which the Rights are redeemed or exchanged by our Board pursuant to the Rights Agreement, (iii) the repeal of Section 382 of the Internal Revenue Code of 1986, as amended, or any successor statute if the Board determines that the Rights Agreement is no longer necessary or desirable for the preservation of the Tax Benefits, (iv) the first business day following the date on which the Rights Agreement fails to be ratified by the our stockholders at our 2020 annual meeting, and (v) the beginning of a taxable year to which the Board determines that no Tax Benefits may be carried forward.

Redemption

At any time prior to such time as any person becomes an Acquiring Person, we may redeem the Rights in whole, but not in part, at a price of \$0.0001 per Right. Immediately upon the action of the Board ordering redemption of the Rights, the Rights will terminate and the only right of the holders of Rights will be to receive the \$0.0001 redemption price.

Anti-Dilution Provisions

The Purchase Price payable, and the number of units of Series A Participating Preferred Stock or other securities or property issuable, upon exercise of the Rights, are subject to adjustment from time to time to prevent dilution (i) in the event of a stock dividend on, or a subdivision, combination or reclassification of, the Series A Participating Preferred Stock, (ii) if holders of the Series A Participating Preferred Stock are granted certain rights or warrants to subscribe for Series A Participating Preferred Stock or convertible securities at less than the current market price of the Series A Participating Preferred Stock, or (iii) upon the distribution to holders of the Series A Participating Preferred Stock of evidences of indebtedness or assets (excluding regular quarterly cash dividends) or of subscription rights or warrants (other than those referred to above). Generally, no adjustments to the Purchase Price of less than 1% will be made.

Amendments

For so long as the Rights are then redeemable, any of the provisions of the Rights Agreement may be amended by the Board without the approval of any holders of the Rights. At any time when the Rights are not then redeemable, the provisions of the Rights Agreement may be amended by the Board to make changes which do not adversely affect the interests of holders of Rights, cause the Rights again to become redeemable or cause the Rights Agreement to become otherwise amendable. In addition, the redemption price under the Rights Agreement may not be amended at any time.

Stockholder Rights

Until a Right is exercised, the holder thereof, as such, will have no rights as the Company's stockholder, including the right to vote or to receive dividends. Stockholder may, depending on circumstances, recognize taxable income in the event that the Rights become exercisable for our Series A Participating Preferred Stock (or other consideration) or in the event the Rights are redeemed.

Anti-Takeover Effects of Provisions of Our Certificate of Incorporation, Bylaws, Other Agreements and Delaware Law

Rights Plan

As described above, the Rights Agreement, also referred to as our rights plan, is designed to protect stockholder value by mitigating the likelihood of an "ownership change" that would result in significant limitations to our ability to use our net operating losses or other tax attributes to offset future income. The rights plan provides, subject to certain exceptions that if any person or group acquires 4.9% or more of our outstanding common stock, there would be a triggering event potentially resulting in significant dilution in the voting power and economic ownership of that person or group. Existing stockholders who hold 4.9% or more of our outstanding common stock as of the date of the rights plan will trigger a dilutive event only if they acquire an additional 1% of the outstanding shares of our common stock. For more information about the Rights and the Rights Agreement, see "Rights to Purchase Series A Participating Preferred Stock."

Provisions of Our Certificate of Incorporation and Bylaws; Delaware Anti-Takeover Statute

Some provisions of our Certificate of Incorporation and Bylaws could delay or prevent a change in control of our Company, including provisions which:

- authorize the issuance of preferred stock by the Board without prior stockholder approval, commonly referred to as "blank check" preferred stock, with rights senior to those of our common stock;
- prohibit stockholder action by written consent (as described below);
- specify procedures for director nominations by stockholders and submission of other proposals for consideration at stockholder meetings; and
- eliminate cumulative voting in the election of directors.

In addition, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us. These and other provisions in our governing documents could reduce the price that investors might be willing to pay for shares of our common stock in the future and result in the market price being lower than it would be without these provisions, and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider in its best interest.

Elimination of Stockholder Action by Written Consent

Under our Certificate of Incorporation, no action may be taken by the stockholders of the Company except at an annual or special meeting of the stockholders called in accordance with the Bylaws, and no action may be taken by our stockholders by written consent.

DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering (i) up to 154,867,256 shares of our common stock and/or pre-funded warrants to purchase shares of our common stock and (ii) accompanying common warrants to purchase up to an aggregate of 154,867,256 shares of our common stock. Each share of common stock or pre-funded warrant is being sold together with a common warrant to purchase one share of common stock. The shares of common stock or pre-funded warrants and accompanying common warrants will be issued separately. Concurrently with the filing of the registration statement of which this prospectus is a part, we filed a registration statement covering the shares of common stock issuable from time to time upon exercise of the common warrants offered in this offering and the placement agent's warrants. We expect that the registration statement covering such shares will become effective on or after such date as we receive stockholder approval of an amendment to our certificate of incorporation to increase the number of shares of our authorized common stock so as to permit the exercise in full of the common warrants and placement agent's warrants and such amendment has become effective, or the Authorized Common Stock Increase.

Common Stock

The material terms and provisions of our common stock and each other class of our securities which qualifies or limits our common stock are described under the caption "Description of Capital Stock" in this prospectus.

Pre-Funded Warrants

The following summary of certain terms and provisions of pre-funded warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the pre-funded warrant, the form of which is being filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of pre-funded warrant for a complete description of the terms and conditions of the pre-funded warrants.

Duration and Exercise Price

Each pre-funded warrant offered hereby will have an initial exercise price per share equal to \$0.001. The pre-funded warrants will be immediately exercisable and may be exercised at any time until all of the pre-funded warrants are exercised in full. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price. The pre-funded warrants will be issued in certificated form.

Exercisability

The pre-funded warrants will be immediately exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). Purchasers of the pre-funded warrants in this offering may elect to deliver their exercise notice following the pricing of the offering and prior to the issuance of the pre-funded warrants at closing to have their pre-funded warrants exercised immediately upon issuance and receive shares of common stock underlying the pre-funded warrants upon closing of this offering. A holder (together with its affiliates) may not exercise any portion of the pre-funded warrant to the extent that the holder would own more than 4.99% (or, at the election of the purchaser, 9.99%) of the outstanding common stock immediately after exercise, except that upon notice from the holder to us, the holder may increase or decrease the beneficial ownership limitation up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage

ownership is determined in accordance with the terms of the pre-funded warrants, provided that any increase in such beneficial ownership limitation shall not be effective until 61 days following notice from the holder to us. No fractional shares of common stock will be issued in connection with the exercise of a pre-funded warrant. In lieu of fractional shares, we will round up to the next whole share.

Cashless Exercise

In lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to exercise its pre-funded warrants on a cashless basis and receive upon such exercise (either in whole or in part) the net number of shares of our common stock determined according to a formula set forth in the pre-funded warrant.

Transferability

Subject to applicable laws, a pre-funded warrant may be transferred at the option of the holder upon surrender of the pre-funded warrant to us together with the appropriate instruments of transfer.

Exchange Listing

There is no established trading market available for the pre-funded warrants on any securities exchange, nationally recognized trading system or otherwise and we do not expect an active trading market to develop. We do not intend to apply to list the pre-funded warrants on Nasdaq, any other securities exchange or any nationally recognized trading system.

Right as a Stockholder

Except as otherwise provided in the pre-funded warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the pre-funded warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they acquire shares of our common stock upon exercise of their pre-funded warrants.

Fundamental Transaction

In the event of a fundamental transaction, as described in the pre-funded warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the pre-funded warrants will be entitled to receive upon exercise of the pre-funded warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the pre-funded warrants immediately prior to such fundamental transaction.

Common Warrants

The following summary of certain terms and provisions of Common Warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Common Warrants, the form of which is being filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Common Warrants for a complete description of the terms and conditions of the common warrants.

Duration and Exercise Price

Each common warrant offered hereby will have an initial exercise price per share equal to \$. The common warrants will be exercisable on or after the date of effectiveness of the Authorized Common Stock Increase, and will expire on the fifth anniversary of the date on which the common warrants become exercisable. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price. The common warrants will be issued separately from the common stock, and may be transferred separately immediately thereafter. A common warrant to purchase one share of our common stock will be issued for every one share of common stock purchased in this offering. The common warrants will be issued in certificated form.

Exercisability

The common warrants will be exercisable on or after the date of effectiveness of the Authorized Common Stock Increase, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the common warrant to the extent that the holder would own more than 4.99% (or, at the election of the purchaser, 9.99%) of the outstanding common stock immediately after exercise, except that upon notice from the holder to us, the holder may increase or decrease the beneficial ownership limitation up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the common warrants, provided that any increase in such beneficial ownership limitation shall not be effective until 61 days following notice from the holder to us. No fractional shares of common stock will be issued in connection with the exercise of a common warrant. In lieu of fractional shares, we will round up to the next whole share.

Cashless Exercise

If, at the time a holder exercises its common warrants, a registration statement registering the issuance of the shares of common stock underlying the common warrants under the Securities Act is not then effective or available, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the common warrants.

Transferability

Subject to applicable laws, the common warrants may be transferred at the election of the holder upon surrender of the common warrant to the warrant agent together with the appropriate instruments of transfer.

Exchange Listing

There is no established trading market available for the pre-funded warrants on any securities exchange, any nationally recognized trading system or otherwise and we do not expect an active trading market to develop. In addition, we do not intend to list the common warrants on Nasdaq, any other securities exchange or any nationally recognized trading system.

Right as a Stockholder

Except as otherwise provided in the common warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the common warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they acquire shares of our common stock upon exercise of their common warrants.

Fundamental Transaction

In the event of a fundamental transaction, as described in the form of common warrant, and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the common warrants will be entitled to receive upon exercise of the common warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the common warrants immediately prior to such fundamental transaction. Notwithstanding the foregoing, in the event of a fundamental transaction, the holders will have the option, which may be exercised within 30 days after the consummation of the fundamental transaction, to require us or our successor entity to purchase the common warrants from the holder by paying to the holder an amount of cash equal to the Black Scholes value of the remaining unexercised portion of the common warrant on the date of the consummation of the fundamental transaction. However, if the fundamental transaction is not within our control, including not approved by our board of directors, the holder will only be entitled to receive from us or our successor entity, as of the date of consummation of such fundamental transaction, the same type or form of consideration (and in the same proportion), at the value per share of Common Stock in the Fundamental Transaction for each Warrant Share underlying this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of common stock are given the choice to receive from among alternative forms of consideration in connection with the fundamental transaction.

PLAN OF DISTRIBUTION

We engaged H.C. Wainwright & Co., LLC ("H.C. Wainwright" or the "placement agent") to act as our exclusive placement agent to solicit offers to purchase the securities offered by this prospectus on a reasonable best efforts basis. H.C. Wainwright is not purchasing or selling any securities, nor are they required to arrange for the purchase and sale of any specific number or dollar amount of securities, other than to use their "reasonable best efforts" to arrange for the sale of the securities by us. Therefore, we may not sell the entire amount of securities being offered. We will enter into a securities purchase agreement directly with the institutional investors, at the investor's option, who purchase our securities in this offering. The securities purchase agreements are expected to provide those investors with certain representations, warranties and covenants from us, which representations, warranties and covenants will not be available to other investors who will not execute a securities purchase agreement in connection with the purchase of our securities in this offering. Investors who do not enter into a securities purchase agreement with us shall rely solely on this prospectus in connection with the purchase of our securities in this offering. H.C. Wainwright may engage one or more sub-placement agents or selected dealers to assist with the offering.

Fees and Expenses

The following table show the per share and common warrant and pre-funded warrant and common warrant placement agent fees and total placement agent fees we will pay in connection with the sale of the securities in this offering, assuming the purchase of all of the securities we are offering.

Per share and common warrant placement agent cash fees	\$
Per pre-funded warrant and common warrant placement agent cash fees	\$
Total	\$

We have agreed to pay the placement agent a total cash fee equal to 7.0% of the gross proceeds of this offering and a management fee equal to 1.0% of the gross proceeds raised in this offering. We will also pay the placement agent a non-accountable expense allowance of \$35,000, \$12,900 for closing expenses, and will reimburse the placement agent's legal fees and expenses in an amount up to \$50,000. We estimate the total offering expenses of this offering that will be payable by us, excluding the placement agent fees and expenses, will be approximately \$. After deducting the placement agent fees and our estimated offering expenses, we expect the net proceeds from this offering to be approximately \$.

Placement Agent's Warrants

We have agreed to grant compensation warrants to H.C. Wainwright to purchase a number of shares of our common stock equal to 6.0% of the aggregate number of shares of common stock and pre-funded warrants sold to the investors in this offering. The placement agent's warrants will have an exercise price of \$ (125% of the combined public offering price per share of common stock and common warrant), will be exercisable on or after the date of effectiveness of the Authorized Common Stock Increase and will terminate on the five year anniversary of the effective date of the registration statement of which this prospectus forms a part. The placement agent's warrants are registered on the registration statement of which this prospectus is a part. Pursuant to FINRA Rule 5110(g), the compensation warrants and any shares issued upon exercise of the compensation warrants shall not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of this offering, except the transfer of any security:

- by operation of law or by reason of our reorganization;

- to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period;
- if the aggregate amount of our securities held by the placement agent or related persons do not exceed 1% of the securities being offered;
- that is beneficially owned on a pro rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund and the participating members in the aggregate do not own more than 10% of the equity in the fund; or
- the exercise or conversion of any security, if all securities remain subject to the lock-up restriction set forth above for the remainder of the time period.

Right of First Refusal

In addition, we have granted a right of first refusal to the placement agent pursuant to which it has the right to act as the exclusive advisor, manager or underwriter or agent, as applicable, if the Company or its subsidiaries sell or acquire a business, finance any indebtedness using an agent, or raise capital through a public or private offering of equity or debt securities at any time prior to the 12 month anniversary of the closing date of this offering.

Other Relationships

The placement agent acted as the placement agent in connection with our registered direct offering of common stock that closed on April 2, 2020, for which it received customary fees and expenses. The placement agent may, from time to time, engage in transactions with or perform services for us in the ordinary course of its business and may continue to receive compensation from us for such services.

Determination of Offering Price

The combined public offering price per share and common warrant and the combined public offering price per pre-funded warrant and common warrant we are offering and the exercise prices and other terms of the warrants were negotiated between us and the investors, in consultation with the placement agent based on the trading of our common stock prior to this offering, among other things. Other factors considered in determining the public offering prices of the securities we are offering and the exercise prices and other terms of the warrants include the history and prospects of our company, the stage of development of our business, our business plans for the future and the extent to which they have been implemented, an assessment of our management, general conditions of the securities markets at the time of the offering and such other factors as were deemed relevant.

Lock-up Agreements

We have agreed with the placement agent to be subject to a lock-up period of 90 days following the date of this prospectus. This means that, during the applicable lock-up period, we may not offer for sale, contract to sell, or sell any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock subject to certain customary exception such as issuing stock options to directors, officers, employees and consultants under our existing plans. The placement agent may, in its sole discretion and without notice, waive the terms of any of this lock-up agreement. In addition, we have agreed to not issue any shares of common stock or securities exercisable or convertible into shares of common stock for a period of ninety (90) days following the closing date of this offering, subject to certain exceptions, and to not issue any securities that are

subject to a price reset based on trading prices of our common stock or upon a specified or contingent event in the future, or enter into an agreement to issue securities at a future determined price, subject to certain exceptions, for a period of one year following the closing date of this offering.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A., 250 Royall Street, Canton, MA 02021.

The Nasdaq Global Select Market listing

Our common stock is listed on The Nasdaq Global Select Market under the symbol "VVUS."

Indemnification

We have agreed to indemnify the placement agent against certain liabilities, including liabilities under the Securities Act of 1933, or to contribute to payments the placement agent may be required to make with respect to any of these liabilities.

Regulation M

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act and any fees received by it and any profit realized on the sale of the securities by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. The placement agent will be required to comply with the requirements of the Securities Act and the Exchange Act of 1934, as amended (the "Exchange Act"), including, without limitation, Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of our securities by the placement agent. Under these rules and regulations, the placement agent may not (i) engage in any stabilization activity in connection with our securities; and (ii) bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following is a general discussion of the material U.S. federal income considerations applicable to the ownership and disposition of shares of our common stock and warrants acquired in this offering. This discussion is for general information only and is not tax advice. Accordingly, all prospective holders of our common stock and warrants should consult their own tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock and warrants. This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus, all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any change could alter the tax consequences described in this prospectus. We assume in this discussion that each holder holds shares of our common stock and warrants as capital assets within the meaning of Section 1221 of the Code (generally property held for investment).

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular holder in light of that holder's individual circumstances, does not address the alternative minimum or Medicare contribution taxes, and does not address any aspects of U.S. state, local or non-U.S. taxes or any U.S. federal taxes other than income tax. This discussion also does not consider any specific facts or circumstances that may apply to a holder and does not address aspects of U.S. federal income taxation that may be applicable to holders that are subject to special tax rules, including without limitation:

- insurance companies;
- tax-exempt organizations;
- financial institutions;
- brokers or dealers in securities;
- regulated investment companies;
- real estate investment trusts;
- pension plans, individual retirement accounts and other tax deferred accounts;
- persons that mark their securities to market;
- controlled foreign corporations;
- passive foreign investment companies;
- "dual resident" corporations;
- persons that receive our common stock or warrants as compensation for the performance of services;
- owners that hold our common stock or warrants as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment;
- owners that own, or are deemed to own, more than 5% of our capital stock (except to the extent specifically set forth below);
- persons that have a functional currency other than the U.S. dollar; and
- certain U.S. expatriates.

In addition, this discussion does not address the tax treatment of partnerships or other pass-through entities for U.S. federal income tax purposes, or persons who hold our common stock or warrants through partnerships or other pass-through entities for U.S. federal income tax purposes. A partner in a partnership or other pass-through entity that will hold our common stock or warrants should consult his, her or its own tax advisor regarding the tax consequences of acquiring, holding and disposing of our common stock or warrants through a partnership or other pass-through entity, as applicable.

As used in this prospectus, the term "U.S. holder" means a beneficial owner of common stock or warrants that is for U.S. federal income tax purposes:

- a citizen or individual resident of the United States;
- a corporation (or other entity properly classified as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state within the United States, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust, if (i) a U.S. court is able to exercise primary supervision over the trust's administration and one or more "United States persons" (as defined in the Code) have the authority to control all substantial decisions of the trust, or (ii) in the case of a trust that was treated as a domestic trust under the laws in effect before 1997, a valid election is in place under applicable U.S. Treasury regulations to treat such trust as a domestic trust.

The term "non-U.S. holder" means any beneficial owner of common stock or warrants that is not a U.S. holder and is not a partnership or other entity properly classified as a partnership for U.S. federal income tax purposes. For the purposes of this prospectus, U.S. holders and non-U.S. holders are referred to collectively as "holders."

There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein. We have not obtained, nor do we intend to obtain, a ruling from the IRS with respect to the U.S. federal income tax consequences of the purchase, ownership or disposition of our common stock or warrants.

Allocation of Purchase Price Between Share of Common Stock or Pre-Funded Warrant and Accompanying Common Warrant

Each share of common stock (or, in lieu of common stock, each pre-funded warrant) and the accompanying common warrant issued pursuant to this offering should be treated as an "investment unit" consisting of one share of common stock or pre-funded warrant, as the case may be, and the accompanying common warrant. The purchase price for each investment unit will be allocated between these components in proportion to their relative fair market values at the time the investment unit is purchased by the holder. This allocation will establish a holder's initial tax basis for U.S. federal income tax purposes in his, her or its share of common stock (or, in lieu of common stock, pre-funded warrant) and common warrant included in each investment unit. We will not be providing holders with such allocation, and it is possible that different holders will reach different determinations regarding such allocation. A holder's allocation of purchase price between each share of common stock (or, in lieu of common stock, each pre-funded warrant) and the accompanying common warrant is not binding on the IRS or the courts, and no assurance can be given that the IRS or the courts will agree with a holder's allocation. The separation of the share of common stock (or, in lieu of common stock, pre-funded warrant) and the common stock warrant included in each investment unit should not be a taxable event for U.S. federal income tax purposes.

Accordingly, each prospective holder should consult his, her or its own tax advisor with respect to the allocation, and the risks associated with such allocation, of the holder's purchase price for the investment unit between our shares of common stock (or, in lieu of common stock, pre-funded warrants) and common warrants.

Treatment of Pre-Funded Warrants

Although it is not entirely free from doubt, a pre-funded warrant should be treated as a share of our common stock for U.S. federal income tax purposes and a holder of pre-funded warrants should generally be taxed in the same manner as a holder of common stock, as described below. Accordingly, no gain or loss should be recognized upon the exercise of a pre-funded warrant and, upon exercise, the holding period of a pre-funded warrant should carry over to the share of common stock received. Similarly, the tax basis of the pre-funded warrant should carry over to the share of common stock received upon exercise, increased by the exercise price of \$0.001 per share. Each holder should consult his, her or its own tax advisor regarding the risks associated with the acquisition of pre-funded warrants pursuant to this offering (including potential alternative characterizations). The balance of this discussion generally assumes that the characterization described above will be respected for U.S. federal income tax purposes.

Tax Consequences to U.S. Holders

Exercise or Expiration of Common Warrants

Subject to the discussion below with respect to the cashless exercise of a common warrant, a U.S. holder will not recognize income, gain or loss on the exercise of a common warrant. A U.S. holder's tax basis in the common stock received upon the exercise of a common warrant will equal the sum of (i) the initial tax basis of the common warrant exercised (as determined pursuant to the rules discussed above under "Allocation of Purchase Price Between Common Stock or Pre-Funded Warrant and Accompanying Common Warrant to Purchase Our Common Stock") and (ii) the exercise price of the common warrant. The U.S. holder's holding period for the common stock received upon exercise of a common warrant will begin on the day after such exercise (or possibly on the date of exercise) and will not include the period during which the U.S. holder held the common warrant.

The tax consequences of a cashless exercise of a common warrant are not clear under current U.S. tax law. A cashless exercise may be tax-free, either because the exercise is not a realization event or because the exercise is treated as a recapitalization for U.S. federal income tax purposes. In either case, a U.S. holder's basis in the common stock received in connection with the cashless exercise would equal the U.S. holder's basis in the common warrants surrendered in connection with the cashless exercise. If the cashless exercise was not a realization event, it is unclear whether a U.S. holder's holding period for the common stock would be treated as commencing on the date of exercise or on the day following the date of exercise. If the cashless exercise were treated as a recapitalization, the holding period of the common stock would include the holding period of the common warrants surrendered in connection with the cashless exercise.

It is possible that a cashless exercise could be treated in part as a taxable exchange in which gain or loss would be recognized. In such event, a U.S. holder could be deemed to have surrendered common warrants having an aggregate fair market value equal to the exercise price for the total number of common warrants to be exercised. The U.S. holder would recognize capital gain or loss in an amount equal to the difference between the amount deemed realized (*i.e.*, the exercise price for the common warrants exercised) and the U.S. holder's tax basis in the common warrants deemed surrendered to pay the exercise price. In this case, a U.S. holder's tax basis in the common stock received would equal the sum of the U.S. holder's initial investment in the exercised common warrants and the exercise price for such common warrants. It is unclear whether a U.S. holder's holding period

for the common stock would commence on the date of exercise of the common warrants or the day following the date of exercise of the common warrants.

Due to the absence of authority on the U.S. federal income tax treatment of a cashless exercise, there can be no assurance which, if any, of the alternative approaches described above would be adopted by the IRS or a court of law. Accordingly, U.S. holders should consult their own tax advisors regarding the tax consequences of a cashless exercise.

If a common warrant is allowed to lapse unexercised, a U.S. holder generally will recognize a capital loss equal to such holder's tax basis in the common warrant. The deductibility of capital losses is subject to significant limitations.

Distributions on Our Common Stock

As discussed above under "—Dividend Policy," we do not currently expect to make distributions on our common stock. In the event that we do make distributions on our common stock to a U.S. holder, those distributions generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the U.S. holder's investment that is applied against and reduces, but not below zero, a U.S. holder's adjusted tax basis in our common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in "—Gain on Sale, Exchange or Other Taxable Disposition of Our Common Stock and Warrants." Dividends paid by us generally will be eligible for the reduced rates of tax for qualified dividend income allowed to individual U.S. holders and for the dividends received deduction allowed to corporate U.S. holders, in each case assuming that certain holding period and other requirements are satisfied.

Constructive Distributions on Our Warrants

Under Section 305 of the Code, an adjustment to the number of shares of common stock that will be issued on the exercise of our warrants (whether pre-funded warrants or common warrants), or an adjustment to the exercise price of such warrants, may be treated as a constructive distribution to a U.S. Holder of the warrants if, and to the extent that, such adjustment has the effect of increasing such U.S. Holder's proportionate interest in our "earnings and profits" or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to holders of our common stock). Adjustments to the exercise price of a warrant made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holder of the warrant should generally not result in a constructive distribution. Any constructive distributions generally would be subject to the tax treatment described above under "—Distributions on our Common Stock."

Sale, Exchange or Other Taxable Disposition of Our Common Stock or Warrants

Upon the sale, exchange, or other taxable disposition of our common stock or warrants (whether pre-funded warrants or common warrants), a U.S. holder will recognize gain or loss equal to the difference between the amount realized upon the disposition and the U.S. holder's tax basis in the common stock or warrants sold or exchanged. Any gain or loss generally will be capital gain or loss, and will be long-term capital gain or loss if the U.S. holder's holding period for the common stock or common warrants exceeded one year at the time of the disposition. Certain U.S. holders (including individuals) are currently eligible for preferential rates of U.S. federal income taxation in respect of long-term capital gains. The deductibility of capital losses is subject to significant limitations.

Information Reporting and Backup Withholding

In general, information reporting requirements may apply to distributions (whether actual or constructive) paid to a U.S. holder on our common stock or warrants, and to the proceeds of the sale, exchange or other disposition of our common stock and warrants, unless the U.S. holder is an exempt recipient. Backup withholding will apply to such payments if the U.S. holder fails to provide a taxpayer identification number, a certification of exempt status or has been notified by the IRS that it is subject to backup withholding (and such notification has not been withdrawn). Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a U.S. holder's U.S. federal income tax liability provided the required information is timely furnished to the IRS.

Tax Consequences to Non-U.S. Holders

Exercise or Expiration of Common Warrants

In general, a non-U.S. holder will not be required to recognize income, gain or loss upon the exercise of a common warrant by payment of the exercise price. To the extent that a cashless exercise results in a taxable exchange, the consequences would be similar to those described below under "—Disposition of our Common Stock or Warrants."

The expiration of a common warrant will be treated as if the non-U.S. holder sold or exchanged the common warrant and recognized a capital loss equal to the non-U.S. holder's basis in the common warrant. A non-U.S. holder will not be able to utilize a loss recognized upon expiration of a common warrant against the Non-U.S. holder's U.S. federal income tax liability, however, unless the loss (i) is effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if an income tax treaty applies, is attributable to a "permanent establishment" or "fixed base" in the United States) or (ii) is treated as a U.S. source loss and the non-U.S. holder is present in the United States 183 days or more in the taxable year of disposition and certain other conditions are met.

Distributions on Our Common Stock

As discussed above under "—Dividend Policy," we do not currently expect to make distributions on our common stock. In the event that we do make distributions to holders of our common stock or if we are treated as making a constructive distribution to holders of our warrants or pre-funded warrants, those distributions generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder's investment, up to such non-U.S. holder's tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in "—Gain on Sale, Exchange or Other Taxable Disposition of Our Common Stock."

Distributions (including constructive distributions) made to a non-U.S. holder that are treated as dividends generally will be subject to withholding of U.S. federal income tax at a rate of 30% of the gross amount or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence, unless such dividends are effectively connected with a trade or business conducted by a non U.S. holder within the U.S. (as discussed below). A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form), as applicable, and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their own tax advisors regarding their entitlement to benefits under a relevant income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may be able to

obtain a refund or credit of any excess amounts withheld by timely filing the required information with the IRS.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a "permanent establishment" or a "fixed base" maintained by the non-U.S. holder within the United States, generally are exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. U.S. effectively connected income, net of specified deductions and credits, is generally taxed at the same graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

Constructive Distributions on Our Warrants

As described above under "*Tax Consequences to U.S. Holders—Constructive Distributions on our Warrants*," an adjustment to the warrants could result in a constructive distribution to a non-U.S. holder, which would be treated as described under "*Distributions on Our Common Stock*" above. Any resulting withholding tax attributable to deemed dividends would be collected from other amounts payable or distributable to the non-U.S. holder. Non U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments to the warrants.

In addition, regulations governing "dividend equivalents" under Section 871(m) of the Code may apply to the pre-funded warrants. Under those regulations, an implicit or explicit payment made to the holder of pre-funded warrants that references a distribution on our common stock would generally be taxable to a non-U.S. holder in the manner described under "*Distributions on our Common Stock*" below. Such dividend equivalent amount would be taxable and subject to withholding whether or not there is actual payment of cash or other property, and we may satisfy any withholding obligations by withholding from other amounts due to the non-U.S. holder. Non-U.S. holders are encouraged to consult their own tax advisors regarding the application of Section 871(m) of the Code to the pre-funded warrants.

Sale, Exchange or Other Taxable Disposition of Our Common Stock or Warrants

In general, a non-U.S. holder will not be subject to any U.S. federal income tax on any gain realized upon such holder's sale, exchange or other taxable disposition of shares of our common stock or warrants unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a "permanent establishment" or a "fixed base" maintained by such non-U.S. holder in the United States, in which case the non-U.S. holder generally will be taxed on such gain at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "*Distributions on Our Common Stock*" also may apply to such gain;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the taxable disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence) on the net gain derived from the taxable disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any; or

- we are, or have been, at any time during the five-year period preceding such taxable disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation," unless our common stock is regularly traded on an established securities market and the non-U.S. holder holds no more than 5% of our outstanding common stock, directly or indirectly, during the shorter of the 5-year period ending on the date of the taxable disposition or the period that the non-U.S. holder held our common stock. If we are determined to be a U.S. real property holding corporation and the foregoing exception does not apply, then a purchaser may withhold 15% of the proceeds payable to a non-U.S. holder from a sale of our common stock or warrants, and the non-U.S. holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code). Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions paid on our common stock (and constructive distributions on our warrants) to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a United States person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock or warrants. Dividends paid to non-U.S. holders subject to the U.S. withholding tax, as described above in "—Distributions on Our Common Stock," generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding generally will apply to the proceeds of a disposition of our common stock and warrants by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder's U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS.

FATCA

The Foreign Account Tax Compliance Act, or FATCA, generally imposes a 30% withholding tax on dividends (including constructive dividends) on, and gross proceeds from the sale or other disposition of, our common stock and Warrants if paid to a non-U.S. entity, whether such non-U.S. entity is the beneficial owner or an intermediary, unless (i) if the non-U.S. entity is a "foreign financial institution,"

the non-U.S. entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the non-U.S. entity is not a "foreign financial institution," the non-U.S. entity identifies certain of its U.S. investors, if any, or (iii) the non-U.S. entity is otherwise exempt under FATCA.

Withholding under FATCA generally will apply to payments of dividends (including constructive dividends) on our common stock and warrants. While withholding under FATCA may apply to payments of gross proceeds from a sale or other disposition of our common stock or warrants, under proposed U.S. Treasury Regulations withholding on payments of gross proceeds is not required. Although such regulations are not final, applicable withholding agents may rely on the proposed regulations until final regulations are issued.

An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Under certain circumstances, a holder may be eligible for refunds or credits of the tax. Non-U.S. holders should consult their own tax advisors regarding the possible implications of FATCA on their investment in our common stock or warrants.

The preceding discussion of material U.S. federal income tax considerations is for informational purposes only. It is not tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock or warrants, including the consequences of any proposed changes in applicable laws.

LEGAL MATTERS

Certain legal matters relating to the issuance of the securities offered by this prospectus will be passed upon for us by Hogan Lovells US LLP, San Francisco, California. Certain legal matters will be passed upon for the Placement Agent by Ellenoff Grossman & Schole LLP, New York, New York.

EXPERTS

The consolidated financial statements of VIVUS, Inc. as of December 31, 2019 and 2018 and for each of the two years in the period ended December 31, 2019 incorporated by reference in this prospectus have been so incorporated in reliance on the report of OUM & Co. LLP, an independent registered public accounting firm (the report on the financial statements contains an explanatory paragraph regarding our ability to continue as a going concern), incorporated in this prospectus by reference, given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the securities being offered under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities being offered under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers, including us, that file electronically with the SEC. The SEC's Internet site can be found at www.sec.gov.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus information that we file with the SEC, which means that important information can be disclosed to you by referring you to those documents and those documents and information will be considered part of this prospectus. The information incorporated by reference is an important part of this prospectus that you should read. Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed to be modified or superseded to the extent that a statement contained herein or in any other subsequently filed document that is incorporated or deemed to be incorporated herein modifies or supersedes that earlier statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. This prospectus also contains summaries of certain provisions contained in some of the documents described in this prospectus, but reference is made to the actual documents for complete information. All of these summaries are qualified in their entirety by reference to the actual documents.

The information and documents listed below, which the Company has filed with the SEC, are incorporated by reference into this prospectus:

- [our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on March 3, 2020](#), as amended by [Amendment No. 1 to Annual Report on Form 10-K/A, filed with the SEC on April 29, 2020](#);
- [our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, filed with the SEC on May 6, 2020](#);

- our Current Reports on Form 8-K filed with the SEC on [January 7, 2020](#); [January 31, 2020](#); [February 5, 2020](#); [February 19, 2020](#); [February 21, 2020](#); [March 2, 2020](#); [March 6, 2020](#); [March 31, 2020](#); [April 1, 2020](#); [April 2, 2020](#); [April 3, 2020](#); [May 1, 2020](#) and [June 2, 2020](#); and
- description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on February 24, 1994, including any amendments or reports filed for the purpose of updating such description.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished with that form that are related to Item 2.02 or Item 7.01, unless the relevant report expressly provides to the contrary) we make with the SEC subsequent to this prospectus pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the securities made pursuant to this prospectus, which will become a part of this prospectus from the respective dates that those documents are filed with the SEC.

Documents incorporated by reference are available from us, without charge. You may obtain documents incorporated by reference in this prospectus (including exhibits to these documents) at no cost, by written or oral request directed to:

VIVUS, Inc.
900 E. Hamilton Avenue, Suite 500
Campbell, California 95008
Attn: Corporate Secretary
Phone: (650) 934-5200

Documents incorporated by reference may also be accessed on our website at <http://ir.vivus.com/financial-information>. The information contained on, or that may be accessed through, our website is not a part of, and is not incorporated by reference into, this prospectus or the registration statement of which this prospectus forms a part, and should not be considered a part of any other document filed with or furnished to the SEC. All website addresses contained in this prospectus are intended to be inactive, textual references only.



154,867,256 Shares of Common Stock

Pre-Funded Warrants to Purchase up to 154,867,256 Shares of Common Stock

Warrants to Purchase up to 154,867,256 Shares of Common Stock

PRELIMINARY PROSPECTUS

H.C. Wainwright & Co.

, 2020

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the expenses to be incurred in connection with the offering described in this registration statement, all of which will be paid by the registrant. All amounts are estimates except the Securities and Exchange Commission ("SEC") registration fee.

	<u>Amount</u>
SEC registration fee	\$ 24,078
FINRA filing fee	\$ 18,000
Legal fees and expenses	\$ 225,000
Clearing expenses	\$ 12,900
Placement agent expenses	\$ 85,000
Accounting fees and expenses	\$ 45,000
Printing expenses	\$ 18,000
Miscellaneous fees	\$ 25,000
Total	<u>\$ 453,000</u>

Item 14. Indemnification of Directors and Officers

The following is a general summary of certain aspects of the General Corporation Law of the State of Delaware (the "Delaware General Corporation Law") and the Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation") and the Amended and Restated Bylaws, as amended (the "Bylaws"), of VIVUS, Inc. (the "Company") related to arrangements under which controlling persons, directors and officers of the Company are indemnified against liability which they may incur in their capacities as such, as well as the Company's indemnification agreements and directors' and officers' insurance, and does not purport to be complete. It is qualified in its entirety by reference to the detailed provisions of the Delaware General Corporation Law, the Certificate of Incorporation, the Bylaws, the Company's form of indemnification agreement with officers of the Company and the Company's form of indemnification agreement with directors of the Company.

Delaware General Corporation Law

As a Delaware corporation, the Company is subject to the provisions of the Delaware General Corporation Law. Section 145(a) of the Delaware General Corporation Law provides that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that the person's conduct was unlawful.

Section 145(b) of the Delaware General Corporation Law states that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which the person shall have been adjudged to be liable to the corporation unless and only to the extent that the Delaware Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for such expenses as the Delaware Court of Chancery or such other court shall deem proper.

Section 145(c) of the Delaware General Corporation Law provides that to the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsections (a) and (b) of Section 145, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

Section 145(d) of the Delaware General Corporation Law states that any indemnification under subsections (a) and (b) of Section 145 (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because the person has met the applicable standard of conduct set forth in subsections (a) and (b) of Section 145. Such determination shall be made with respect to a person who is a director or officer at the time of such determination (1) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, (2) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (4) by the stockholders.

Section 145(f) of the Delaware General Corporation Law states that the indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of Section 145 shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office.

Section 145(g) of the Delaware General Corporation Law provides that a corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under the provisions of Section 145.

Section 145(j) of the Delaware General Corporation Law states that the indemnification and advancement of expenses provided by, or granted pursuant to, Section 145 shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

Certificate of Incorporation

The Certificate of Incorporation provides for the indemnification of the officers and directors of the Company to the fullest extent permitted by applicable law. The Certificate of Incorporation generally states that each person who was or is made a party to, or is threatened to be made a party to, any civil or criminal action, suit or administrative or investigative proceeding by reason of the fact that such person or his or her testator or intestate is or was a director, officer or employee of the Company or serves or served at any other enterprise as a director, officer or employee at the request of the Company shall be indemnified and held harmless by the Company to the fullest extent authorized by the Delaware General Corporation Law. In addition, the Certificate of Incorporation provides that, to the fullest extent permitted by the Delaware General Corporation Law, the Company's directors will not be personally liable to the Company or its stockholders for monetary damages resulting from a breach of their fiduciary duties as directors, except for such liability as is expressly not subject to limitation under the Delaware General Corporation Law, as the same exists or may hereafter be amended to further limit or eliminate such liability. Section 102(b)(7) of the Delaware General Corporation Law provides that a provision of the certificate of incorporation of a corporation eliminating or limiting the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director shall not eliminate or limit the liability of a director (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) under Section 174 of the Delaware General Corporation Law or (4) for any transaction from which the director derived an improper personal benefit.

Bylaws

The Bylaws provide for the indemnification of the officers and directors of the Company to the fullest extent permitted by applicable law. The Bylaws state that each person who was or is made a party to, or is threatened to be made a party to, any civil or criminal action, suit or administrative or investigative proceeding by reason of the fact that such person is or was or has agreed to become a director or officer of the Company or, while a director or officer of the Company, is or was serving or has agreed to serve at the request of the Company as a director or officer of another corporation or of a partnership, joint venture, trust, or other enterprise, shall be indemnified and held harmless by the Company to the fullest extent authorized by the Delaware General Corporation Law against all liability and loss suffered and all expenses (including attorneys' fees) reasonably incurred by such person in connection therewith.

Indemnification Agreements and Insurance

The Company has entered into indemnification agreements with its directors and executive officers, in addition to the indemnification provided for in the Certificate of Incorporation and Bylaws, and the Company intends to enter into indemnification agreements with any new directors and executive officers in the future.

The Company has an insurance policy covering its officers and directors with respect to certain liabilities, including certain liabilities arising under the Securities Act.

Item 15. Recent Sales of Unregistered Securities

On April 1, 2020, in connection with the entrance into an engagement agreement between the Company and H.C. Wainwright & Co., LLC ("Wainwright"), the Company issued to affiliates of Wainwright warrants ("Wainwright Warrants") to purchase 433,125 shares of the Company's common stock. The Wainwright Warrants are exercisable immediately for five years from issuance with an exercise price of \$2.00 per share. The Company issued the warrants and will issue the underlying

common stock pursuant to the exemption from registration provided by Section 4(a)(2) of the Securities Act.

On June 8, 2018, the Company issued a warrant to purchase 3.3 million shares of the Company's common stock to affiliates of Athyrium Capital Management. The warrant has an exercise price of \$0.3951 per share, is immediately exercisable and will expire six years after the issuance date. The Company issued the warrant and will issue the underlying common stock pursuant to the exemption from registration provided by Section 4(a)(2) of the Securities Act.

On April 30, 2018, the Company issued warrants to purchase 3.6 million shares of the Company's common stock to the shareholders of Willow Biopharma Inc., with an exercise price of \$0.37 per share. The warrants are immediately exercisable and will expire seven years after the date of issuance. The Company issued the warrants and will issue the underlying common stock pursuant to the exemption from registration provided by Section 4(a)(2) of the Securities Act.

On February 23, 2018, the Company issued a warrant to purchase 1.5 million shares of the Company's common stock to Torrey Capital, LLC, with an exercise price of \$0.44 per share, a five-year term and a cashless exercise feature. 750,000 shares vested immediately and the remaining 750,000 shares will vest over a ten month period beginning February 28, 2018, subject to continued services being offered by Torrey Capital, LLC. The Company issued the warrant and will issue the underlying common stock pursuant to the exemption from registration provided by Section 4(a)(2) of the Securities Act.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits

Exhibit Number	Description	Incorporation by reference		
		Exhibit	Form	Filing Date
2.1†	Asset Purchase Agreement between the Registrant and K-V Pharmaceutical Company, dated as of March 30, 2007	2.1	Form 10-K for the fiscal year ended December 31, 2012 (001-33389)	February 26, 2013
2.2†	Asset Purchase Agreement dated October 1, 2010, between the Registrant, MEDA AB and Vivus Real Estate, LLC	2.2	Form 10-K/A for the fiscal year ended December 31, 2012 (001-33389)	June 12, 2013
2.3†	Asset Purchase Agreement between the Registrant and Janssen Pharmaceuticals, Inc., dated April 30, 2018	2.1	Form 10-Q for the fiscal quarter ended June 30, 2018 (001-33389)	August 7, 2018
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as amended and restated through September 10, 2018	3.1	Form 8-K (001-33389)	September 10, 2018
3.2	Amended and Restated Bylaws of the Registrant, as further amended	3.2	Form 10-Q for the fiscal quarter ended June 30, 2018 (001-33389)	August 7, 2018

Exhibit Number	Description	Incorporation by reference		
		Exhibit	Form	Filing Date
3.3	Amended and Restated Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of the Registrant	3.3	Form 8-A (001-33389)	March 28, 2007
4.1	Specimen Common Stock Certificate of the Registrant	4.1	Form 10-K/A for the fiscal year ended December 31, 1996 (001-33389)	April 16, 1997
4.2	Preferred Stock Rights Agreement, dated as of December 30, 2019, between the Registrant and Computershare Trust Company, N.A.	4.1	Form 8-K (001-33389)	December 31, 2019
4.3	Indenture dated as of May 21, 2013, by and between the Registrant and Deutsche Bank Trust Company Americas, as trustee	4.1	Form 8-K (001-33389)	May 21, 2013
4.4	Form of 4.50% Convertible Senior Note due May 1, 2020 (included in Exhibit 4.3)	4.2	Form 8-K (001-33389)	May 21, 2013
4.5	Indenture, dated as of June 8, 2018, among the Registrant, the other guarantors from time to time party thereto and U.S. Bank National Association, as trustee and collateral agent	4.1	Form 8-K (001-33389)	June 11, 2018
4.6	First Supplemental Indenture, dated as of October 11, 2018, among the Registrant, as issuer and U.S. Bank National Association, as trustee and collateral agent	4.3	Form 8-K (001-33389)	October 17, 2018
4.7	Second Supplemental Indenture, dated as of September 30, 2019, among the Registrant, as issuer and U.S. Bank National Association, as trustee and collateral agent	4.2	Form 8-K (001-33389)	October 3, 2019
4.8	Form of 2024 Note (included in Exhibit 4.5)	4.2	Form 8-K (001-33389)	June 11, 2018
4.9	Warrant to Purchase Shares of Common Stock issued to Torreya Capital, LLC dated February 23, 2018	4.5	Form 10-Q for the fiscal quarter ended March 31, 2018 (001-33389)	May 8, 2018
4.10	Form of Athyrium Warrant, dated as of June 8, 2018	4.3	Form 8-K (001-33389)	June 11, 2018

<u>Exhibit Number</u>	<u>Description</u>	<u>Incorporation by reference</u>		
		<u>Exhibit</u>	<u>Form</u>	<u>Filing Date</u>
4.11*	Form of Warrant to be issued by the Registrant to certain shareholders of Willow Biopharma Inc.	4.9	Form 10-Q for the fiscal quarter ended June 30, 2018 (001-33389)	August 7, 2018
4.12†††	Form of Pre-Funded Warrant			
4.13†††	Form of Common Warrant			
4.14†††	Form of Placement Agent's Warrant			
4.15	Form of Placement Agent Warrant	4.1	Form 8-K (001-33389)	April 2, 2020
5.1†††	Opinion of Hogan Lovells US LLP			
10.1*	Form of Indemnification Agreement by and among the Registrant and the Officers of the Registrant	10.11	Form 8-B (001-33389)	June 25, 1996
10.2*	Form of Indemnification Agreement by and among the Registrant and the Directors of the Registrant	10.1	Form 8-K (001-33389)	August 12, 2014
10.3*	1994 Employee Stock Purchase Plan	4.2	Form S-8 (001-33389)	August 6, 2019
10.4*	2001 Stock Option Plan and Form of Agreement thereunder	10.44	Form S-8 (001-33389)	November 15, 2001
10.5*	2001 Stock Option Plan, as amended on July 12, 2006	10.1	Form 8-K (001-33389)	July 13, 2006
10.6*	Form of Notice of Grant and Restricted Stock Unit Agreement under the VIVUS, Inc. 2001 Stock Option Plan	10.2	Form 8-K (001-33389)	July 13, 2006
10.7*	2010 Equity Incentive Plan and Form of Agreement thereunder	10.7	Form 10-K for the fiscal year ended December 31, 2010 (001-33389)	March 1, 2011
10.8*	2010 Equity Incentive Plan	4.1	Form S-8 (001-33389)	December 15, 2017
10.9*	Stand-Alone Stock Option Agreement with Michael P. Miller dated as of April 30, 2010	10.1	Form 8-K (001-33389)	May 6, 2010
10.10*	2018 Inducement Equity Incentive Plan	4.1	Form S-8 (001-33389)	June 1, 2018
10.11*	Form of Agreement under the 2018 Inducement Equity Incentive Plan	10.4	Form 10-Q for the fiscal quarter ended June 30, 2018 (001-33389)	August 7, 2018

<u>Exhibit Number</u>	<u>Description</u>	<u>Incorporation by reference</u>		
		<u>Exhibit</u>	<u>Form</u>	<u>Filing Date</u>
10.12*	2018 Equity Incentive Plan	4.1	Form S-8 (001-33389)	August 6, 2019
10.13*	Form of Restricted Stock Units Agreement under the 2018 Equity Incentive Plan	10.2	Form 10-Q for the fiscal quarter ended September 30, 2018 (001-33389)	November 1, 2018
10.14*	Form of Stock Option Agreement under the 2018 Equity Incentive Plan	10.3	Form 10-Q for the fiscal quarter ended September 30, 2018 (001-33389)	November 1, 2018
10.15†	Agreement effective as of December 28, 2000, between the Registrant and Tanabe Seiyaku Co., Ltd.	10.15	Form 10-K for the fiscal year ended December 31, 2012 (001-33389)	February 26, 2013
10.16	Amendment No. 1 effective as of January 9, 2004, to the Agreement effective as of December 28, 2000, between the Registrant and Tanabe Seiyaku Co., Ltd.	10.42A	Form 10-Q for the fiscal quarter ended March 31, 2004 (001-33389)	May 7, 2004
10.17	Termination and Release executed by Tanabe Holding America, Inc. dated May 1, 2007	10.61	Form 8-K (001-33389)	May 4, 2007
10.18†	Second Amendment effective as of August 1, 2012, to the Agreement dated as of December 28, 2000, between the Registrant and Mitsubishi Tanabe Pharma Corporation (formerly Tanabe Seiyaku Co., Ltd.)	10.1	Form 8-K (001-33389)	August 10, 2012
10.19†	Third Amendment effective as of February 21, 2013, to the Agreement dated as of December 28, 2000, between the Registrant and Mitsubishi Tanabe Pharma Corporation (formerly Tanabe Seiyaku Co., Ltd.)	10.1	Form 8-K (001-33389)	February 25, 2013
10.20	Fourth Amendment to the Agreement dated as of December 28, 2000, between the Registrant and Mitsubishi Tanabe Pharma Corporation (formerly Tanabe Seiyaku Co., Ltd.), effective as of July 1, 2013	10.1	Form 8-K (001-33389)	July 29, 2013
10.21†	Settlement and Modification Agreement dated July 12, 2001, between ASIVI, LLC, AndroSolutions, Inc., Gary W. Neal and the Registrant	10.20	Form 10-K for the fiscal year ended December 31, 2012 (001-33389)	February 26, 2013

<u>Exhibit Number</u>	<u>Description</u>	<u>Incorporation by reference</u>		
		<u>Exhibit</u>	<u>Form</u>	<u>Filing Date</u>
10.22 [†]	Assignment Agreement between Thomas Najarian, M.D. and the Registrant dated October 16, 2001	10.79	Form 10-K for the fiscal year ended December 31, 2009 (001-33389)	March 10, 2010
10.23 [†]	Master Services Agreement dated as of September 12, 2007, between the Registrant and Medpace, Inc.	10.2	Form 10-Q for the fiscal quarter ended March 31, 2013 (001-33389)	May 8, 2013
10.24 [†]	Exhibit A: Medpace Task Order Number: 06 dated as of December 15, 2008, pursuant to that certain Master Services Agreement, between the Registrant and Medpace, Inc., dated as of September 12, 2007	10.1	Form 8-K/A (001-33389)	July 15, 2009
10.25 [†]	Commercial Manufacturing and Packaging Agreement by and between the Registrant and Catalent Pharma Solutions, LLC dated as of July 17, 2012	10.1	Form 8-K (001-33389)	July 23, 2012
10.26 [†]	Purchase and Sale Agreement effective as of March 25, 2013, between the Registrant and BioPharma Secured Investments III Holdings Cayman LP	10.1	Form 10-Q for the fiscal quarter ended March 31, 2013 (001-33389)	May 8, 2013
10.27	Capped Call Confirmation dated May 15, 2013, by and between the Registrant and Deutsche Bank AG, London Branch	10.1	Form 8-K (001-33389)	May 16, 2013
10.28 [*]	Form of Amended and Restated Change of Control and Severance Agreement	10.1	Form 8-K (001-33389)	July 5, 2013
10.29 [*]	Form of Second Amended and Restated Change of Control and Severance Agreement	10.1	Form 8-K (001-33389)	June 24, 2015
10.30 [*]	Form of Third Amended and Restated Change of Control and Severance Agreement	10.5	Form 10-Q for the fiscal quarter ended June 30, 2018 (001-33389)	August 7, 2018
10.31 [†]	License and Commercialization Agreement dated July 5, 2013, between the Registrant and Berlin-Chemie AG	10.3	Form 10-Q for the fiscal quarter ended June 30, 2013 (001-33389)	August 8, 2013

Exhibit Number	Description	Incorporation by reference		
		Exhibit	Form	Filing Date
10.32†	Commercial Supply Agreement dated as of July 5, 2013, between the Registrant and Berlin-Chemie AG	10.4	Form 10-Q for the fiscal quarter ended June 30, 2013 (001-33389)	August 8, 2013
10.33††	Amendment No. 1 to License and Commercialization Agreement and Commercial Supply Agreement dated May 21, 2019 between the Registrant and the Menarini Group through its subsidiary Berlin-Chemie AG	10.3	Form 10-Q (001-33389)	August 6, 2019
10.34	Agreement dated July 18, 2013, by and between the Registrant and First Manhattan Co.	10.1	Form 8-K (001-33389)	July 19, 2013
10.35*	Letter Agreement dated July 18, 2013, by and among the Registrant, First Manhattan Co. and Peter Y. Tam	10.1	Form 8-K (001-33389)	July 24, 2013
10.36*	Employment Agreement dated September 3, 2013, by and between the Registrant and Seth H. Z. Fischer	10.1	Form 8-K (001-33389)	September 4, 2013
10.37*†	Confidential Separation, General Release and Post-Separation Consulting Agreement effective December 31, 2017, between the Registrant and Seth H. Z. Fischer	10.55	Form 10-K for the fiscal year ended December 31, 2017 (001-33389)	March 14, 2018
10.38†	License and Commercialization Agreement dated as of October 10, 2013, by and between the Registrant and Auxilium Pharmaceuticals, Inc.	10.9	Form 10-Q for the quarter ended September 30, 2013 (001-33389)	November 7, 2013
10.39†	Commercial Supply Agreement dated as of October 10, 2013, by and between the Registrant and Auxilium Pharmaceuticals, Inc.	10.10	Form 10-Q for the quarter ended September 30, 2013 (001-33389)	November 7, 2013
10.40	Letter Regarding Termination Notice dated December 30, 2015, from Auxilium Pharmaceuticals, Inc. and Endo Ventures Limited to the Registrant	10.53	Form 10-K for the fiscal year ended December 31, 2015 (001-33389)	March 9, 2016
10.41	Letter Regarding Termination Notice dated as of June 30, 2016, from Auxilium Pharmaceuticals, Inc. and Endo Ventures Limited to the Registrant	10.1	Form 10-Q for the fiscal quarter ended June 30, 2016 (001-33389)	August 4, 2016

Exhibit Number	Description	Incorporation by reference		
		Exhibit	Form	Filing Date
10.42	Letter Regarding Termination Notice dated as of August 29, 2016, from Auxilium Pharmaceuticals, LLC and Endo Ventures Limited to the Registrant	10.1	Form 10-Q for the fiscal quarter ended September 30, 2016 (001-33389)	November 9, 2016
10.43*	Letter Agreement dated November 4, 2013, by and between the Registrant and Timothy E. Morris	10.1	Form 8-K (001-33389)	November 5, 2013
10.44†	Commercial Supply Agreement dated July 31, 2013, by and between the Registrant and Sanofi Chimie	10.8	Form 10-Q for the fiscal quarter ended June 30, 2013 (001-33389)	August 8, 2013
10.45†	Termination, Rights Reversion and Transition Services Agreement dated March 23, 2017, by and between the Registrant and Sanofi	10.3	Form 10-Q for the fiscal quarter ended March 31, 2017 (001-33389)	May 3, 2017
10.46†	Manufacturing and Supply Agreement dated November 18, 2013, by and between the Registrant and Sanofi Winthrop Industrie	10.45	Form 10-K for the fiscal year ended December 31, 2013 (001-33389)	February 28, 2014
10.47††	Amendment N^o 1 to the Manufacturing and Supply Agreement dated May 22, 2019 between the Registrant and Sanofi Winthrop Industrie	10.2	Form 10-Q (001-33389)	August 6, 2019
10.48†	License and Commercialization Agreement dated December 11, 2013, by and between the Registrant and Sanofi	10.46	Form 10-K for the fiscal year ended December 31, 2013 (001-33389)	February 28, 2014
10.49†	Supply Agreement effective as of December 11, 2013, by and between the Registrant and Sanofi Winthrop Industrie	10.47	Form 10-K for the fiscal year ended December 31, 2013 (001-33389)	February 28, 2014
10.50†	Patent Assignment Agreement, dated August 24, 2014, by and between the Registrant and Janssen Pharmaceuticals, Inc.	10.1	Form 10-Q for the fiscal quarter ended September 30, 2014 (001-33389)	November 5, 2014
10.51*	Letter Agreement dated April 13, 2015, by and between the Registrant and Guy P. Marsh	10.1	Form 10-Q for the fiscal quarter ended June 30, 2015 (001-33389)	August 3, 2015
10.52*	Letter Agreement dated July 20, 2015, by and between the Registrant and Wesley W. Day, Ph.D.	10.3	Form 10-Q for the fiscal quarter ended June 30, 2015 (001-33389)	August 3, 2015

<u>Exhibit Number</u>	<u>Description</u>	<u>Incorporation by reference</u>		
		<u>Exhibit</u>	<u>Form</u>	<u>Filing Date</u>
10.53*	Letter Agreement dated August 17, 2015, by and between the Registrant and Svai S. Sanford	10.3	Form 10-Q for the fiscal quarter ended September 30, 2015 (001-33389)	November 4, 2015
10.54	Lease Agreement effective December 11, 2012, by and between the Registrant and SFERS Real Estate Corp. U.	10.34	Form 10-K for the fiscal year ended December 31, 2012 (001-33389)	February 26, 2013
10.55	First Amendment to Lease effective August 30, 2016, between the Registrant and MV Campus Owner, LLC, the successor in interest to SFERS Real Estate Corp. U.	10.2	Form 10-Q for the fiscal quarter ended September 30, 2016 (001-33389)	November 9, 2016
10.56	Office Lease effective September 2, 2016, between the Registrant and AG-SW Hamilton Plaza Owner, L.P.	10.3	Form 10-Q for the fiscal quarter ended September 30, 2016 (001-33389)	November 9, 2016
10.57†	License and Commercialization Agreement dated as of September 30, 2016, by and between the Registrant and Metuchen Pharmaceuticals LLC	10.4	Form 10-Q for the fiscal quarter ended September 30, 2016 (001-33389)	November 9, 2016
10.58†	Commercial Supply Agreement dated as of September 30, 2016, by and between the Registrant and Metuchen Pharmaceuticals LLC	10.5	Form 10-Q for the fiscal quarter ended September 30, 2016 (001-33389)	November 9, 2016
10.59†	Patent Assignment Agreement dated as of January 6, 2017, by and between the Registrant and Selten Pharma, Inc.	10.55	Form 10-K for the fiscal year ended December 31, 2016 (001-33389)	March 8, 2017
10.60†	License Assignment Agreement dated as of January 6, 2017, by and between the Registrant and Selten Pharma, Inc.	10.56	Form 10-K for the fiscal year ended December 31, 2016 (001-33389)	March 8, 2017
10.61†	Settlement Agreement dated June 29, 2017, by and between the Registrant and Actavis Laboratories FL, Inc.	10.1	Form 10-Q for the fiscal quarter ended June 30, 2017 (001-33389)	August 3, 2017
10.62	Collateral Agreement, dated as of June 8, 2018, among the Registrant, the other guarantors from time to time party thereto and U.S. Bank National Association, as trustee and collateral agent	10.1	Form 8-K (001-33389)	June 11, 2018

<u>Exhibit Number</u>	<u>Description</u>	<u>Incorporation by reference</u>		
		<u>Exhibit</u>	<u>Form</u>	<u>Filing Date</u>
10.63	Purchase Agreement between the Registrant and affiliates of Athyrium Capital Management dated April 30, 2018	10.3	Form 10-Q for the fiscal quarter ended June 30, 2018 (001-33389)	August 7, 2018
10.64 [†]	Amendment N°1 to Commercial Supply Agreement dated December 7, 2018 between Sanofi Chimie and the Registrant	10.62	Form 10-K for the fiscal year ended December 31, 2018 (001-33389)	February 26, 2019
10.65	Amendment No. 1 to Collateral Agreement dated as of July 6, 2018 between the Registrant and U.S. Bank National Association, as trustee and collateral agent	10.63	Form 10-K for the fiscal year ended December 31, 2018 (001-33389)	February 26, 2019
10.66	Amendment No. 2 to Collateral Agreement dated as of October 11, 2018 between the Registrant and U.S. Bank National Association, as trustee and collateral agent	10.64	Form 10-K for the fiscal year ended December 31, 2018 (001-33389)	February 26, 2019
10.67	Amendment No. 3 to Collateral Agreement dated as of December 7, 2018 between the Registrant and U.S. Bank National Association, as trustee and collateral agent	10.65	Form 10-K for the fiscal year ended December 31, 2018 (001-33389)	February 26, 2019
10.68	Amendment No. 4 to Collateral Agreement dated as of March 20, 2019 between the Registrant and U.S. Bank National Association, as trustee and collateral agent	10.1	Form 10-Q (001-33389)	April 30, 2019
10.69	Amendment No. 5 to Collateral Agreement dated as of June 5, 2019 between the Registrant and U.S. Bank National Association, as trustee and collateral agent	10.1	Form 10-Q (001-33389)	August 6, 2019
10.70 ^{††}	Amended and Restated Know-How License and Supply Agreement dated November 3, 2017 between Janssen Pharmaceuticals, Inc. and Nordmark Arzneimittel GmbH & Co. KG	10.4	Form 10-Q (001-33389)	August 6, 2019
10.71 ^{††}	First Amendment to the Amended and Restated Know-How License and Supply Agreement dated June 26, 2019 between the Registrant and Nordmark Arzneimittel GmbH & Co. KG	10.5	Form 10-Q (001-33389)	August 6, 2019

Exhibit Number	Description	Incorporation by reference		
		Exhibit	Form	Filing Date
10.72	Form of Securities Purchase Agreement, dated April 1, 2020, by and between the Company and the Purchasers	10.1	Form 8-K (001-33389)	April 2, 2020
10.73	Engagement Agreement, dated April 1, 2020, by and between the Company and H.C. Wainwright & Co., LLC	10.2	Form 8-K (001-33389)	April 2, 2020
10.74	Agreement Regarding Convertible Notes, dated as of April 29, 2020, among the Company, IEH Biopharma LLC and Deutsche Bank Trust Company Americas	10.1	Form 8-K (001-33389)	May 1, 2020
10.75†††	Form of Securities Purchase Agreement			
10.76#	Restructuring Support Agreement, dated May 31, 2020, by and between the Company and Icahn Enterprise Holdings L.P. (dba IEH Biopharma, LLC)	10.77	Form S-1 (333-239024)	June 8, 2020
21.1	List of Subsidiaries	21.1	Form 10-K for the fiscal year ended December 31, 2019 (001-33389)	March 3, 2020
23.1†††	Consent of Independent Registered Public Accounting Firm			
23.2†††	Consent of Hogan Lovells US LLP (included in Exhibit 5.1)			
24.1#	Power of Attorney (included in previously filed signature page)			

† Confidential treatment granted.

†† Portions of this exhibit have been omitted pursuant to Item 601(b) of Regulation S-K.

††† Filed herewith.

Previously filed.

* Indicates management contract or compensatory plan or arrangement.

(b) Financial Statement Schedules

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or related notes, which are incorporated in this prospectus by reference.

Item 17. Undertakings

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that:

Paragraphs (1)(i), (1)(ii) and (1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or, as to a registration statement on Form S-3, Form SF-3 or Form F-3, is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (5) That, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (6) That, for purposes of determining any liability under the Securities Act of 1933:
- (i) the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective;
 - (ii) each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

PRE-FUNDED COMMON STOCK PURCHASE WARRANT

VIVUS, INC.

Warrant Shares:

Initial Exercise Date: , 2020

THIS PRE-FUNDED COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Initial Exercise Date") and until this Warrant is exercised in full (the "Termination Date") but not thereafter, to subscribe for and purchase from VIVUS, Inc., a Delaware corporation (the "Company"), up to shares (as subject to adjustment hereunder, the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

"Business Day" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to "stay at home", "shelter-in-place", "non-essential employee" or any other similar orders or restrictions or

the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Registration Statement” means the Company’s registration statement on Form S-1 (File No. 333-239024).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Subsidiary” means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the Common Stock is traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means Computershare Trust Company, N.A., the current transfer agent of the Company, with a mailing address of 250 Royall Street, Canton, MA 02021 and a facsimile number of _____, and any successor transfer agent of the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrants” means this Warrant and other Common Stock purchase warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d) (i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. Notwithstanding the foregoing, with respect to

any Notice(s) of Exercise delivered on or prior to 4:00 p.m. (New York City time) on the Trading Date prior to the Initial Exercise Date, which may be delivered at any time after _____, 2020(1), the Company agrees to deliver the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Initial Exercise Date and the Initial Exercise Date shall be the Warrant Share Delivery Date for purposes hereunder, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by such Warrant Share Delivery Date. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The aggregate exercise price of this Warrant, except for a nominal exercise price of \$0.001 per Warrant Share, was pre-funded to the Company on or prior to the Initial Exercise Date and, consequently, no additional consideration (other than the nominal exercise price of \$0.001 per Warrant Share) shall be required to be paid by the Holder to any Person to effect any exercise of this Warrant. The Holder shall not be entitled to the return or refund of all, or any portion, of such pre-paid aggregate exercise price under any circumstance or for any reason whatsoever, including in the event this Warrant shall not have been exercised prior to the Termination Date. The remaining unpaid exercise price per share of Common Stock under this Warrant shall be \$0.001, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. This Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder's execution of the applicable Notice of Exercise if such Notice of Exercise is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such

(1) Insert the date that the Securities Purchase Agreement is executed.

Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

- i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder’s or its designee’s balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system (“DWAC”) if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the “Warrant Share Delivery Date”). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per

Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a

total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together

with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties"), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% (or, upon election by a Holder prior to the issuance of any Warrants, 9.99%) of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the

Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however,

that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (and all of its Subsidiaries, taken as a whole), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another

Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a “Fundamental Transaction”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the

Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (and all of its Subsidiaries, taken as a whole) is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange;

provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any

13

exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a "cashless exercise" pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

14

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party

for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at _____, Attention: _____, facsimile number: _____, email address: _____, or such other facsimile number, email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of

the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder, on the other hand.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

VIVUS, INC.

By: _____
Name:
Title:

NOTICE OF EXERCISE

TO: VIVUS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:



ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____,

Holder's Signature: _____

Holder's Address: _____

COMMON STOCK PURCHASE WARRANT

VIVUS, INC.

Warrant Shares:

THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, _____ or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the Authorized Share Approval Date (the "Initial Exercise Date") and on or prior to 5:00 p.m. (New York City time) on [](1) (the "Termination Date") but not thereafter, to subscribe for and purchase from VIVUS, Inc., a Delaware corporation (the "Company"), up to _____ shares (as subject to adjustment hereunder, the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Authorized Share Approval" means (i) the affirmative vote by the stockholders of the Company to approve an amendment to the Company's Amended and Restated Certificate of Incorporation to increase the number of authorized shares of Common Stock from 200,000,000 to _____ (the "Amendment") and (ii) the filing by the Company of the Amendment with the Secretary of State of the State of Delaware and the acceptance of the Amendment by the Secretary of State of the State of Delaware such that the Amendment has become effective pursuant to the General Corporation Law of the State of Delaware.

"Authorized Share Approval Date" means the date on which Authorized Share Approval is obtained and deemed effective.

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or

(1) Insert the date that is the [] year anniversary of the Initial Exercise Date, provided that, if such date is not a Trading Day, insert the immediately following Trading Day.

quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Board of Directors” means the board of directors of the Company.

“Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Registration Statement” means the Company’s registration statement on Form S-1 (File No. 333-239024).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Subsidiary” means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the Common Stock is traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means Computershare Trust Company, N.A., the current transfer agent of the Company, with a mailing address of 250 Royall Street, Canton, MA 02021 and a facsimile number of _____, and any successor transfer agent of the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrants” means this Warrant and other Common Stock purchase warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the

earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d) (i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise delivered on or prior to 4:00 p.m. (New York City time) on the Trading Date prior to the Initial Exercise Date, which may be delivered at any time after _____, 2020(2), the Company agrees to deliver the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Initial Exercise Date and the Initial Exercise Date shall be the Warrant Share Delivery Date for purposes hereunder, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by such Warrant Share Delivery Date. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The exercise price per share of Common Stock under this Warrant shall be \$ _____, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is

(2) Insert the date that the Securities Purchase Agreement is executed.

not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

- i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder’s or its designee’s balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system (“DWAC”) if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the “Warrant Share Delivery Date”). Upon

delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, “Standard Settlement Period” means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder’s brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “Buy-In”), then the

Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the

Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more

recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The “Beneficial Ownership Limitation” shall be 4.99% (or, upon election by a Holder prior to the issuance of any Warrants, 9.99%) of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (and all of its Subsidiaries, taken as a whole), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or

substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a “Fundamental Transaction”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder’s option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, that, if the Fundamental Transaction is not within the Company’s control, including not approved by the Company’s Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental

Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. “Black Scholes Value” means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the “OV” function on Bloomberg, L.P. (“Bloomberg”) determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the greater of (i) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (ii) the greater of (x) the last VWAP immediately prior to the public announcement of such Fundamental Transaction and (y) the last VWAP immediately prior to the consummation of such Fundamental Transaction and (D) a remaining option time equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, and (E) a zero cost of borrow. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds within five Business Days of the Holder’s election (or, if later, on the effective date of the Fundamental Transaction). The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such

Fundamental Transaction, the provisions of this Warrant referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (and all of its Subsidiaries, taken as a whole) is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common

13

Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. Within two (2) Trading Days following the Authorized Share Approval Date, the Company shall cause notice of such Authorized Share Approval to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

g) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market, the Company may at any time during the term of this Warrant, subject to the prior written consent of the Holder, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section

14

4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a "cashless exercise" pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period commencing on the Authorized Share Approval Date and ending on the Termination Date, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are

charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication

of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at _____, Attention: _____, facsimile number: _____, email address: _____, or such other facsimile number, email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered

via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder, on the other hand.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

VIVUS, INC.

By: _____
Name:
Title:

NOTICE OF EXERCISE

TO: VIVUS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:



ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____,

Holder's Signature: _____

Holder's Address: _____

PLACEMENT AGENT COMMON STOCK PURCHASE WARRANT

VIVUS, INC.

Warrant Shares:

THIS PLACEMENT AGENT COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the Authorized Share Approval Date (the "Initial Exercise Date") and on or prior to 5:00 p.m. (New York City time) on [](1) (the "Termination Date") but not thereafter, to subscribe for and purchase from VIVUS, Inc., a Delaware corporation (the "Company"), up to [] shares (as subject to adjustment hereunder, the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). This Warrant is issued pursuant to that certain Engagement Agreement, by and between the Company and H.C. Wainwright & Co., LLC, dated as of April 1, 2020.

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Authorized Share Approval" means (i) the affirmative vote by the stockholders of the Company to approve an amendment to the Company's Amended and Restated Certificate of Incorporation to increase the number of authorized shares of Common Stock from 200,000,000 to [] (the "Amendment") and (ii) the filing by the Company of the Amendment with the Secretary of State of the State of Delaware and the acceptance of the Amendment by the Secretary of State of the State of Delaware such that the Amendment has become effective pursuant to the General Corporation Law of the State of Delaware.

"Authorized Share Approval Date" means the date on which Authorized Share Approval is obtained and deemed effective.

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or

(1) Insert the date that is the 5 year anniversary of the effective date of the Registration Statement, provided that, if such date is not a Trading Day, insert the immediately preceding Trading Day.

quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Board of Directors” means the board of directors of the Company.

“Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Registration Statement” means the Company’s registration statement on Form S-1 (File No. 333-239024).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Subsidiary” means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the Common Stock is traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means Computershare Trust Company, N.A., the current transfer agent of the Company, with a mailing address of 250 Royall Street, Canton, MA 02021 and a facsimile number of _____, and any successor transfer agent of the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d) (i) herein) following the date of

exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise delivered on or prior to 4:00 p.m. (New York City time) on the Trading Date prior to the Initial Exercise Date, which may be delivered at any time after _____, 2020(2), the Company agrees to deliver the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Initial Exercise Date and the Initial Exercise Date shall be the Warrant Share Delivery Date for purposes hereunder, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by such Warrant Share Delivery Date. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The exercise price per share of Common Stock under this Warrant shall be \$ _____, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of "regular trading hours"

(2) Insert the date that the Securities Purchase Agreement is executed.

(as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder's execution of the applicable Notice of Exercise if such Notice of Exercise is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of "regular trading hours" on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the "Warrant Share Delivery Date"). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant

Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, “Standard Settlement Period” means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder’s brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “Buy-In”), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder’s total purchase price (including brokerage commissions, if

any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation

performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of

shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The “Beneficial Ownership Limitation” shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or reclassification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock

Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise, other than cash (including, without limitation, any distribution of stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (and all of its Subsidiaries, taken as a whole), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or

another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder's option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, that, if the Fundamental Transaction is not within the Company's control, including not approved by the Company's Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and

paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. “Black Scholes Value” means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the “OV” function on Bloomberg, L.P. (“Bloomberg”) determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the greater of (i) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (ii) the greater of (x) the last VWAP immediately prior to the public announcement of such Fundamental Transaction and (y) the last VWAP immediately prior to the consummation of such Fundamental Transaction and (D) a remaining option time equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, and (E) a zero cost of borrow. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds within five Business Days of the Holder’s election (or, if later, on the effective date of the Fundamental Transaction). The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the

Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (and all of its Subsidiaries, taken as a whole) is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange;

provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. Within two (2) Trading Days following the Authorized Share Approval Date, the Company shall cause notice of such Authorized Share Approval to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

g) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market and applicable FINRA rules, the Company may at any time during the term of this Warrant, subject to the prior written consent of the Holder, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

Section 4. Transfer of Warrant.

a) Transferability. Pursuant to FINRA Rule 5110(g)(1), neither this Warrant nor any Warrant Shares issued upon exercise of this Warrant shall be sold, transferred, assigned, pledged or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of the offering pursuant to which this Warrant is being issued, except the transfer of any security:

- (i) by operation of law or by reason of reorganization of the Company;
- (ii) to any FINRA member firm participating in the offering and the officers and partners thereof, if all securities so transferred remain subject to the lock-up restriction in this Section 4(a) for the remainder of the time period;
- (iii) if the aggregate amount of securities of the Company held by the Holder or related person do not exceed 1% of the securities being offered;
- (iv) that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund, and participating members in the aggregate do not own more than 10% of the equity in the fund; or

- (v) the exercise or conversion of any security, if all securities received remain subject to the lock-up restriction in this Section 4(a) for the remainder of the time period.

Subject to the foregoing restriction, this Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the “Warrant Register”), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a “cashless exercise” pursuant to Section 2(c) or to receive

cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period commencing on the Authorized Share Approval Date and ending on the Termination Date, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against

impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at _____, Attention: _____, facsimile number: _____, email address: _____, or such other facsimile number, email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the

provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder, on the other hand.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

VIVUS, INC.

By: _____

Name:

Title:

NOTICE OF EXERCISE

TO: VIVUS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:



ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____,

Holder's Signature:

Holder's Address:



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June 19, 2020

Board of Directors
 VIVUS, Inc.
 900 E. Hamilton Avenue, Suite 550
 Campbell, CA 95008

Ladies and Gentlemen:

We are acting as counsel to VIVUS, Inc., a Delaware corporation (the “Company”), in connection with its registration statement on Form S-1, as amended (the “Registration Statement,” File Number 333-239024), filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the “Act”), relating to the proposed public offering of (i) up to 154,867,256 shares of common stock, par value \$0.001 per share (the “Common Stock”) of the Company (the “Shares”), and 154,867,256 associated preferred stock purchase rights (the “Rights”), all of which rights are to be issued pursuant to the Preferred Stock Rights Agreement, dated as of December 30, 2019 (the “Rights Agreement”), between the Company and Computershare Trust Company, N.A., as Rights Agent (the “Rights Agent”), (ii) pre-funded warrants to purchase up to 154,867,256 shares of Common Stock (the “Pre-Funded Warrants” and the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants, the “Warrant Shares”), (iii) warrants to purchase up to 154,867,256 shares of Common Stock (the “Common Warrants”) accompanying each Share or Pre-Funded Warrant, as applicable, and (iv) warrants to purchase up to 9,292,035 shares of Common Stock to be issued to designees of H.C. Wainwright & Co., LLC, as placement agent (the “Placement Agent’s Warrants” and collectively with the Pre-Funded Warrants and the Common Warrants, the “Warrants,” and together with the Shares, the “Securities”), all of which are to be sold by the Company. This opinion letter is furnished to you at your request to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K, 17 C.F.R. § 229.601(b)(5), in connection with the Registration Statement.

For purposes of this opinion letter, we have examined copies of such agreements, instruments and documents as we have deemed an appropriate basis on which to render the opinions hereinafter expressed. In our examination of the aforesaid documents, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the accuracy and completeness of all documents submitted to us, the authenticity of all original documents, and the conformity to authentic original documents of all documents submitted to us as copies (including pdfs). We also have assumed that (1) the Rights Agreement has been duly authorized, executed, and delivered by the Rights Agent and that the members of the Board of Directors of the Company have acted in a manner consistent with their fiduciary duties as required under applicable law in adopting the Rights Agreement and (2) prior to the time of issuance and delivery of shares of Common Stock in connection with any exercise of the Common Warrants or Placement Agent’s Warrants (in each case when exercisable), the Amended and Restated Certificate of Incorporation of the Company will have been effectively amended in accordance with the

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Delaware General Corporation Law, as amended, to increase the number of authorized shares of Common Stock so that there will be a sufficient number of shares of Common Stock authorized and then available for issuance upon exercise thereof upon requisite stockholder approval. As to all matters of fact, we have relied on the representations and statements of fact made in the documents so reviewed, and we have not independently established the facts so relied on. This opinion letter is given, and all statements herein are made, in the context of the foregoing.

This opinion letter is based as to matters of law solely on the Delaware General Corporation Law, as amended, and, as to the opinions given in paragraphs (b) and (c), the laws of the State of New York (but not including any laws, statutes, ordinances, judicial or administrative decisions, rules or regulations of any political subdivision below the state level). We express no opinion herein as to any other statutes, rules or regulations.

Based upon, subject to and limited by the foregoing, we are of the opinion that, as of the date hereof, the (i) Shares and Warrant Shares and in each case the associated Rights and (ii) the Warrants have been duly authorized by all necessary corporate action on the part of the Company and, following (1) effectiveness of the Registration Statement, (2) the execution and delivery of the Securities Purchase Agreement (the "Purchase Agreement") between the Company and certain purchasers of the Securities, (3) the due execution by the Company of the Warrants, (4) the issuance and delivery of the Shares and Warrants in the manner contemplated by the Registration Statement and, if applicable, the Purchase Agreement, and (5) receipt by the Company of the consideration for the Securities specified in the resolutions of the Board of Directors and the Pricing Committee of the Board of Directors, as applicable:

- a) The Shares will be validly issued, fully paid and nonassessable and the associated Rights will be valid and binding obligations of the Company.
- b) The Warrants will constitute valid and binding obligations of the Company.
- c) The Warrant Shares, following the issue thereof upon exercise of the Pre-Funded Warrants pursuant to their terms and receipt by the Company of the exercise price therefor as specified in the Warrants, will be validly issued, fully paid and non-assessable and the associated Rights will be valid and binding obligations of the Company.

It should be understood that the opinion in paragraphs (a) and (c) above concerning the Rights does not address the determination a court of competent jurisdiction may make regarding whether the Board of Directors of the Company would be required to redeem or terminate, or take other action with respect to, the Rights at some future time based on the facts and circumstances existing at that time and that our opinion above addresses the Rights and the Rights Agreement in their entirety and not any particular provision of the Rights or the Rights Agreement and that it is not settled whether the invalidity of any particular provision of a rights agreement or of rights issued thereunder would result in invalidating in their entirety such rights.

The opinions expressed above with respect to the valid and binding nature of obligations may be limited by bankruptcy, insolvency, reorganization, receivership, moratorium or other laws affecting creditors' rights (including, without limitation, the effect of statutory and other law regarding fraudulent conveyances, fraudulent transfers and preferential transfers) and by the exercise of judicial discretion and the application of principles of equity, good faith, fair dealing, reasonableness, conscionability and materiality (regardless of whether the Securities and the Rights are considered in a proceeding in equity or at law).

This opinion letter has been prepared for use in connection with the Registration Statement. We assume no obligation to advise of any changes in the foregoing subsequent to the effective date of the Registration Statement.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption “Legal Matters” in the prospectus constituting a part of the Registration Statement. In giving this consent, we do not thereby admit that we are an “expert” within the meaning of the Act.

Very truly yours,

/s/ HOGAN LOVELLS US LLP

HOGAN LOVELLS US LLP

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this “Agreement”) is dated as of _____, 2020, between VIVUS, Inc., a Delaware corporation (the “Company”), and each purchaser identified on the signature pages hereto (each, including its successors and assigns, a “Purchaser,” and collectively the “Purchasers”).

WHEREAS, subject to the terms and conditions set forth in this Agreement and pursuant to an effective registration statement under the Securities Act of 1933, as amended (the “Securities Act”), the Company desires to issue and sell to each Purchaser, and each Purchaser, severally and not jointly, desires to purchase from the Company, securities of the Company as more fully described in this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and each Purchaser agree as follows:

ARTICLE I.
DEFINITIONS

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms have the meanings set forth in this Section 1.1:

“Acquiring Person” shall have the meaning ascribed to such term in Section 4.5.

“Action” shall have the meaning ascribed to such term in Section 3.1(j).

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act.

“Authorized Share Approval” means (i) the affirmative vote by the stockholders of the Company to approve an amendment to the Company’s Amended and Restated Certificate of Incorporation to increase the number of authorized shares of Common Stock from 200,000,000 to _____ (the “Amendment”) and (ii) the filing by the Company of the Amendment with the Secretary of State of the State of Delaware and the acceptance of the Amendment by the Secretary of State of the State of Delaware such that the Amendment has become effective pursuant to the General Corporation Law of the State of Delaware.

“Authorized Share Approval Date” means the date on which Authorized Share Approval is obtained and deemed effective.

“Board of Directors” means the board of directors of the Company.

“Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be

deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

“Closing” means the closing of the purchase and sale of the Securities pursuant to Section 2.1.

“Closing Date” means the Trading Day on which all of the Transaction Documents have been executed and delivered by the applicable parties thereto, and all conditions precedent to (i) the Purchasers’ obligations to pay the Subscription Amount and (ii) the Company’s obligations to deliver the Securities, in each case, have been satisfied or waived, but in no event later than the second (2nd) Trading Day following the date hereof.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Common Purchase Price” equals \$ per each Share and accompanying Common Warrant, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement and prior to the Closing Date.

“Common Subscription Amount” means, as to each Purchaser, the aggregate amount to be paid for the Shares and Common Warrants hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Common Subscription Amount,” in United States dollars and in immediately available funds.

“Common Warrants” means, collectively, the Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which Common Warrants shall be exercisable from and after the Authorized Share Approval Date and have a term of exercise equal to years, in the form of Exhibit A-1 attached hereto.

“Common Warrant Shares” means the Common Stock issuable upon exercise of the Common Warrants (when exercisable in accordance with their terms).

“Company Counsel” means Hogan Lovells US LLP, with offices located at 3 Embarcadero Center, Suite 1500, San Francisco, California 94111.

“Disclosure Schedules” means the Disclosure Schedules of the Company delivered concurrently herewith.

“Disclosure Time” means, (i) if this Agreement is signed on a day that is not a Trading Day or after 9:00 a.m. (New York City time) and before midnight (New York City time) on any Trading Day, 9:01 a.m. (New York City time) on the Trading Day immediately following the date hereof, unless otherwise instructed as to an earlier time by the Placement Agent, and (ii) if this Agreement is signed between midnight (New York City time) and 9:00 a.m. (New York City time) on any Trading Day, no later than 9:01 a.m. (New York City time) on the date hereof, unless otherwise instructed as to an earlier time by the Placement Agent.

“EGS” means Ellenoff Grossman & Schole LLP, with offices located at 1345 Avenue of the Americas, New York, New York 10105-0302.

“Evaluation Date” shall have the meaning ascribed to such term in Section 3.1(s).

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Exempt Issuance” means the issuance of (a) shares of Common Stock or options to employees, officers or directors of the Company pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company, (b) securities upon the exercise or exchange of or conversion of (i) any Securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of this Agreement, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities (other than in connection with stock splits or combinations) or to extend the term of such securities, or (ii) warrants of the Company issued and outstanding on the date of this Agreement, the Company’s 4.50% convertible senior notes due May 1, 2020 and the Company’s 10.375% senior secured notes due June 30, 2024, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities (other than in connection with stock splits or combinations) or to extend the term of such securities, (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the prohibition period in Section 4.10(a) herein, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to any entity whose primary business is investing in

securities, (d) up to \$ of Shares, Pre-Funded Warrants, and Common Warrants issued to other purchasers pursuant to the Prospectus concurrently with the Closing at the Common Purchase Price or Pre-Funded Purchase Price, (e) if and to the extent that the aggregate price of Securities purchased at the Closing (the “Sale Amount”) by all persons purchasing on the Closing Date (including but not limited to the Purchasers) is an amount less than a total of \$175 million, such amount of Shares, Pre-Funded Warrants, and Common Warrants, issued pursuant to the Prospectus, as shall represent the difference between \$175 million and the Sale Amount provided that such terms shall not be materially less favorable to the Company than the terms hereunder and (f) the issuance of warrants exercisable for Common Stock in connection with any sale of debt securities of the Company that is not a Variable Rate Transaction to the purchasers of such debt securities provided that the exercise price of such warrants shall not be less than the exercise price of the Warrants nor shall any other terms therein be materially less favorable to the Company than the terms of the Warrants.

“FCPA” means the Foreign Corrupt Practices Act of 1977, as amended.

“FDA” shall have the meaning ascribed to such term in Section 3.1(hh).

“FDCA” shall have the meaning ascribed to such term in Section 3.1(hh).

“GAAP” shall have the meaning ascribed to such term in Section 3.1(h).

“Indebtedness” shall have the meaning ascribed to such term in Section 3.1(aa).

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3.1(p).

“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction other than pursuant to the agreements set forth on Schedule 3.1(aa).

“Material Adverse Effect” shall have the meaning assigned to such term in Section 3.1(b).

“Material Permits” shall have the meaning ascribed to such term in Section 3.1(n).

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Pharmaceutical Product” shall have the meaning ascribed to such term in Section 3.1(hh).

“Placement Agent” means H.C. Wainwright & Co., LLC.

“Pre-Funded Purchase Price” equals \$ per each Pre-Funded Warrant and accompanying Common Warrant, subject to adjustment for reverse and forward stock

splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement and prior to the Closing Date.

“Pre-Funded Subscription Amount” means, as to each Purchaser, the aggregate amount to be paid for the Pre-Funded Warrants and Common Warrants purchased hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Pre-Funded Subscription Amount,” in United States dollars and in immediately available funds.

“Pre-Funded Warrants” means, collectively, the Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which Pre-Funded Warrants shall be exercisable immediately and shall expire when exercised in full, in the form of Exhibit A-2 attached hereto.

“Pre-Funded Warrant Shares” means the Common Stock issuable upon exercise of the Pre-Funded Warrants.

“Preliminary Prospectus” means the preliminary prospectus set forth in the Registration Statement dated June 8, 2020, filed with the Commission.

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the final prospectus filed for the Registration Statement.

“Purchaser Party” shall have the meaning ascribed to such term in Section 4.8.

“Registration Statement” means the effective registration statement on Form S-1 with the Commission File No. 333-239024 which registers the sale of the Shares, the Warrants and the Pre-Funded Warrant Shares to the Purchasers.

“Required Approvals” shall have the meaning ascribed to such term in Section 3.1(e).

“Rule 144” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“SEC Reports” shall have the meaning ascribed to such term in Section 3.1(h).

“Securities” means the Shares, the Warrants and the Warrant Shares.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Shares” means the shares of Common Stock issued or issuable to each Purchaser pursuant to this Agreement.

“Short Sales” means all “short sales” as defined in Rule 200 of Regulation SHO under the Exchange Act (but shall not be deemed to include locating and/or borrowing shares of Common Stock).

“Subscription Amount” means the Common Subscription Amount and/or the Pre-Funded Subscription Amount, as applicable, in accordance with the terms of Section 2.1 of this Agreement.

“Subsidiary” means any subsidiary of the Company as set forth on Schedule 3.1(a), and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“Transaction Documents” means this Agreement, the Warrants, all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Transfer Agent” means Computershare Trust Company, N.A., the current transfer agent of the Company, with a mailing address of 250 Royall Street, Canton, MA 02021, and any successor transfer agent of the Company.

“Variable Rate Transaction” shall have the meaning ascribed to such term in Section 4.10(b).

“Warrants” means, collectively, the Common Warrants and the Pre-Funded Warrants.

“Warrant Shares” means the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants and the Common Warrants (when exercisable in accordance with their terms).

ARTICLE II.
PURCHASE AND SALE

2.1 Closing. On the Closing Date, upon the terms and subject to the conditions set forth herein, the Company agrees to sell, and the Purchasers, severally and not jointly, agree to purchase, up to an aggregate of \$ of Shares and Common Warrants as determined pursuant to Section 2.2(a); provided, however, that, solely to the extent a Purchaser determines, in its sole discretion, that such Purchaser (together with such Purchaser's Affiliates, and any Person acting as a group together with such purchaser or any of such Purchaser's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation, in lieu of purchasing Shares and Common Warrants, such Purchaser may elect to purchase Pre-Funded Warrants and Common Warrants at the Pre-Funded Purchase Price in lieu of Shares and Common Warrants. The "Beneficial Ownership Limitation" shall be 4.99% (or, at the election of the Purchaser, 9.99%) of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of the Securities on the Closing Date. Unless otherwise directed by the Placement Agent, each Purchaser shall deliver, via wire transfer or a certified check, immediately available funds equal to its Subscription Amount pursuant to Section 2.2(b)(ii), and the Company shall deliver to each Purchaser its respective Shares and Common Warrants and/or Pre-Funded Warrants (as applicable to such Purchaser) and Common Warrants, as determined pursuant to Section 2.2(a), and the Company and each Purchaser shall deliver the other items set forth in Section 2.2 deliverable at the Closing. Upon satisfaction of the covenants and conditions set forth in Sections 2.2 and 2.3, the Closing shall occur at the offices of EGS or such other location as the parties shall mutually agree. Each Purchaser acknowledges that, concurrently with the Closing and pursuant to the Prospectus, the Company may sell up to \$ of additional Shares and Warrants to purchasers not party to this Purchase Agreement, and will issue to each such purchaser such additional shares of Common Stock and Common Warrants or Pre-Funded Warrants and Common Warrants in the same form and at the same Common Purchase Price or Pre-Funded Purchase Price. The Company covenants that, if the Purchaser delivers a Notice of Exercise (as defined in the Pre-Funded Warrants) no later than 12:00 p.m. (New York City time) on the Closing Date to exercise Pre-Funded Warrants between the date hereof and the Closing Date, the Company shall deliver Pre-Funded Warrant Shares to the Purchaser on the Closing Date in connection with such Notice of Exercise. Unless otherwise directed by the Placement Agent, settlement of the Shares shall occur via "Delivery Versus Payment" ("DVP") (i.e., on the Closing Date, the Company shall issue the Shares registered in the Purchasers' names and addresses and released by the Transfer Agent directly to the account(s) at the Placement Agent identified by each Purchaser; upon receipt of such Shares, the Placement Agent shall promptly electronically deliver such Shares to the applicable Purchaser, and payment therefor shall be made by the Placement Agent (or its clearing firm) by wire transfer to the Company).

2.2 Deliveries.

- (a) On or prior to the Closing Date, the Company shall deliver or cause to be delivered to each Purchaser the following:
 - (i) this Agreement duly executed by the Company;

(ii) a legal opinion of Company Counsel, in a form reasonably acceptable to the Placement Agent and Purchasers;

(iii) subject to the last sentence of Section 2.1, the Company shall have provided each Purchaser with the Company's wire instructions, on Company letterhead;

(iv) subject to the last sentence of Section 2.1, a copy of the irrevocable instructions to the Transfer Agent instructing the Transfer Agent to deliver on an expedited basis via The Depository Trust Company Deposit or Withdrawal at Custodian system ("DWAC") Shares equal to such Purchaser's Common Subscription Amount divided by the Common Purchase Price, registered in the name of such Purchaser;

(v) as to each Purchaser purchasing Pre-Funded Warrants, a Pre-Funded Warrant registered in the name of such Purchaser to purchase up to a number of Shares as set forth in the Pre-Funded Warrant, with an exercise price per share of Common Stock equal to \$0.001, subject to adjustment as set forth therein (such Pre-Funded Warrant certificate may be delivered within three Trading Days of the Closing Date);

(vi) a Common Warrant registered in the name of such Purchaser to purchase up to a number of shares of Common Stock equal to % of the aggregate of such Purchaser's Shares and/or Pre-Funded Warrant Shares underlying Pre-Funded Warrants, with an exercise price equal to \$ per share of Common Stock, subject to adjustment as set forth therein (such Common Warrant certificate may be delivered within three Trading Days of the Closing Date); and

(vii) the Preliminary Prospectus and Prospectus (which may be delivered in accordance with Rule 172 under the Securities Act).

(b) On or prior to the Closing Date, each Purchaser shall deliver or cause to be delivered to the Company the following:

(i) this Agreement duly executed by such Purchaser; and

(ii) such Purchaser's Subscription Amount, which shall be made available for "Delivery Versus Payment" settlement with the Company or its designees.

2.3 Closing Conditions.

(a) The obligations of the Company hereunder in connection with the Closing are subject to the following conditions being met:

(i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse

Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Purchasers contained herein (unless as of a specific date therein in which case they shall be accurate as of such date);

(ii) all obligations, covenants and agreements of each Purchaser required to be performed at or prior to the Closing Date shall have been performed; and

(iii) the delivery by each Purchaser of the items set forth in Section 2.2(b) of this Agreement.

(b) The respective obligations of the Purchasers hereunder in connection with the Closing are subject to the following conditions being met:

(i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Company contained herein (unless as of a specific date therein in which case they shall be accurate as of such date);

(ii) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date shall have been performed;

(iii) the delivery by the Company of the items set forth in Section 2.2(a) of this Agreement;

(iv) there shall have been no Material Adverse Effect with respect to the Company since the date hereof; and

(v) from the date hereof to the Closing Date, trading in the Common Stock shall not have been suspended by the Commission or the Company's principal Trading Market, and, at any time prior to the Closing Date, trading in securities generally as reported by Bloomberg L.P. shall not have been suspended or limited, or minimum prices shall not have been established on securities whose trades are reported by such service, or on any Trading Market, nor shall a banking moratorium have been declared either by the United States or New York State authorities nor shall there have occurred any material outbreak or escalation of hostilities or other national or international calamity of such magnitude in its effect on, or any material adverse change in, any financial market which, in each case, in the reasonable judgment of such Purchaser, makes it impracticable or inadvisable to purchase the Securities at the Closing.

ARTICLE III. REPRESENTATIONS AND WARRANTIES

3.1 Representations and Warranties of the Company. Except as set forth in the Disclosure Schedules, which Disclosure Schedules shall be deemed a part hereof and shall qualify any representation or otherwise made herein to the extent of the disclosure contained in

the corresponding section of the Disclosure Schedules, the Company hereby makes the following representations and warranties to each Purchaser:

(a) Subsidiaries. All of the direct and indirect subsidiaries of the Company are set forth on Schedule 3.1(a). The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities. If the Company has no subsidiaries, all other references to the Subsidiaries or any of them in the Transaction Documents shall be disregarded.

(b) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing (or its foreign equivalent) under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing (or its foreign equivalent) as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (i), (ii) or (iii), a "Material Adverse Effect") and no Proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(c) Authorization; Enforcement. Subject to Authorized Share Approval, the Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's stockholders in connection herewith or therewith other than in connection with the Required Approvals. This Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable

10

principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(d) No Conflicts. Except as set forth in Schedule 3.1(d), the execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, subject to Authorized Share Approval, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, anti-dilution or similar adjustments, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

(e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filings required pursuant to Section 4.4 of this Agreement, (ii) the filing with the Commission of the Prospectus and any applicable amendment to the Registration Statement, (iii) application(s) to each applicable Trading Market for the listing of the Shares and Warrant Shares for trading thereon in the time and manner required thereby, (iv) such filings as are required to be made under applicable state securities or blue sky laws, (v) such approvals as have been obtained as of the date hereof, (vi) approval of and/or clearance by the Financial Industry Regulatory Authority, Inc. and (vii) the Authorized Share Approval (collectively, the "Required Approvals").

(f) Issuance of the Securities; Registration. The Shares and Pre-Funded Warrant Shares are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. Subject to Authorized Share Approval, the Warrants are duly authorized and, when issued, will be

11

validly issued, and free and clear of all Liens imposed by the Company. Subject to Authorized Share Approval, the Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to this Agreement and the Warrants. The Company has prepared and filed the Registration Statement in conformity in all material respects with the requirements of the Securities Act, which became effective on , 2020 (the “Effective Date”), including the Prospectus, and such amendments and supplements thereto as may have been required to the date of this Agreement. The Registration Statement is effective under the Securities Act and no stop order preventing or suspending the effectiveness of the Registration Statement or suspending or preventing the use of the Preliminary Prospectus or the Prospectus has been issued by the Commission and no proceedings for that purpose have been instituted or, to the knowledge of the Company, are threatened by the Commission. The Company, if required by the rules and regulations of the Commission, shall file the Prospectus with the Commission pursuant to Rule 424(b). At the time the Registration Statement and any amendments thereto became effective, at the date of this Agreement and at the Closing Date, the Registration Statement and any amendments thereto conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Preliminary Prospectus the Prospectus and any amendments or supplements thereto, at the time the Preliminary Prospectus and the Prospectus or any amendment or supplement thereto was issued and at the Closing Date, conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(g) Capitalization. The capitalization of the Company as of the date hereof is as set forth on Schedule 3.1(g), which Schedule 3.1(g) shall also include the number of shares of Common Stock owned beneficially, and of record, by Affiliates of the Company as of the date hereof. Except as set forth on Schedule 3.1(g), the Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of employee stock options under the Company’s stock option plans, the issuance of shares of Common Stock to employees pursuant to the Company’s employee stock purchase plans and pursuant to the conversion and/or exercise of Common Stock Equivalents outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. Except as a result of the purchase and sale of the Securities, as set forth on Schedule 3.1(g) or in the SEC Reports (as defined below), there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock or the capital stock of any Subsidiary, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents or capital stock of any Subsidiary. The

issuance and sale of the Securities will not obligate the Company or any Subsidiary to issue shares of Common Stock or other securities to any Person (other than the Purchasers). Except as set forth on Schedule 3.1(g) or in the SEC Reports there are no outstanding securities or instruments of the Company or any Subsidiary with any provision that adjusts the exercise, conversion, exchange or reset price of such security or instrument upon an issuance of securities by the Company or any Subsidiary. There are no outstanding securities or instruments of the Company or any Subsidiary that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to redeem a security of the Company or such Subsidiary. The Company does not have any stock appreciation rights or “phantom stock” plans or agreements or any similar plan or agreement. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all applicable federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. Except for the Required Approvals, no further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Securities. There are no stockholders agreements, voting agreements or other similar agreements with respect to the Company’s capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company’s stockholders.

(h) SEC Reports; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the one year preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Preliminary Prospectus and the Prospectus, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited

statements, to normal, immaterial, year-end audit adjustments. The Company has never been an issuer subject to Rule 144(i) under the Securities Act.

(i) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, except as set forth on Schedule 3.1(i), (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans. Except for the issuance of the Securities contemplated by this Agreement or as set forth on Schedule 3.1(i), no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least one (1) Trading Day prior to the date that this representation is made.

(j) Litigation. There is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an "Action") which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) could, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(k) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company's or its Subsidiaries' employees is a member of a union that relates to such employee's relationship with the Company or such Subsidiary, and neither the Company

nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(l) Compliance. Neither the Company nor any Subsidiary: (i) is, after giving effect to the [Restructuring Support Agreement, dated May 31, 2020, by and between the Company and Icahn Enterprise Holdings L.P. \(dba IEH Biopharma, LLC\)](#), in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect.

(m) Environmental Laws. The Company and its Subsidiaries (i) are in compliance with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "Hazardous Materials") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder ("Environmental Laws"); (ii) have received all permits licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses; and (iii) are in compliance with all terms and conditions of any such permit, license or approval where in each clause (i), (ii) and (iii), the failure to so comply could be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect.

(n) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits could not reasonably be expected to result in a Material Adverse Effect (“Material Permits”), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.

(o) Title to Assets. The Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title in all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (ii) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made therefor in accordance with GAAP and, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance.

(p) Intellectual Property. The Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights necessary or required for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have could have a Material Adverse Effect (collectively, the “Intellectual Property Rights”). None of, and neither the Company nor any Subsidiary has received a notice (written or otherwise) that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within two (2) years from the date of this Agreement except as would not reasonably be expected to have a Material Adverse Effect. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the SEC Reports, a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as could not have or reasonably be expected to not have a Material Adverse Effect. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has no knowledge that it lacks or will be unable to obtain any rights or licenses to use all Intellectual Property Rights that are necessary to conduct its business.

(q) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as

are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(r) Transactions With Affiliates and Employees. Except as set forth on Schedule 3.1(r), none of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits and severance benefits, including stock option agreements under any stock option plan of the Company.

(s) Sarbanes-Oxley; Internal Accounting Controls. The Company and the Subsidiaries are in material compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the Closing Date. The Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over

financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

(t) Certain Fees. Except as set forth in the Preliminary Prospectus or the Prospectus, no brokerage or finder's fees or commissions are or will be payable by the Company or any Subsidiary to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by the Transaction Documents.

(u) Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Securities, will not be or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an "investment company" subject to registration under the Investment Company Act of 1940, as amended.

(v) Registration Rights. No Person has any right to cause the Company or any Subsidiary to effect the registration under the Securities Act of any securities of the Company or any Subsidiary.

(w) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. The Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through the Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees to the Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.

(x) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's certificate of incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable to the Purchasers as a result of the Purchasers and the Company fulfilling their obligations or exercising their rights under

the Transaction Documents, including without limitation as a result of the Company's issuance of the Securities and the Purchasers' ownership of the Securities.

(y) Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company confirms that neither it nor any other Person acting on its behalf has provided any of the Purchasers or their agents or counsel with any information that it believes constitutes or might constitute material, non-public information which is not otherwise disclosed in the Preliminary Prospectus or the Prospectus. The Company understands and confirms that the Purchasers will rely on the foregoing representation in effecting transactions in securities of the Company. All of the disclosure furnished by or on behalf of the Company to the Purchasers regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby, including the Disclosure Schedules to this Agreement, is true and correct in all material respects as of the date hereof and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement taken as a whole do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and agrees that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.2 hereof.

(z) No Integrated Offering. Assuming the accuracy of the Purchasers' representations and warranties set forth in Section 3.2, neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of any applicable shareholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

(aa) Solvency. Schedule 3.1(aa) sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments. For the purposes of this Agreement, "Indebtedness" means (x) any liabilities for borrowed money or amounts owed in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company's consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP. After giving effect to the [Restructuring Support Agreement, dated May 31, 2020, by and](#)

between the Company and Icahn Enterprise Holdings L.P. (dba IEH Biopharma, LLC), either the Company nor any Subsidiary is in default with respect to any Indebtedness.

(bb) Tax Status. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and its Subsidiaries each (i) has made or filed all United States federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company or of any Subsidiary know of no basis for any such claim.

(cc) Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of FCPA.

(dd) Accountants. The Company's independent registered public accounting firm is OUM & Co. LLP. To the knowledge and belief of the Company, such accounting firm (i) is a registered public accounting firm as required by the Exchange Act and (ii) shall express its opinion with respect to the financial statements to be included in the Company's Annual Report for the fiscal year ending December 31, 2020.

(ee) Acknowledgment Regarding Purchasers' Purchase of Securities. The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated thereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by any Purchaser or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchasers' purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

20

(ff) Acknowledgment Regarding Purchaser's Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding (except for Sections 3.2(f) and 4.13 hereof), it is understood and acknowledged by the Company that: (i) none of the Purchasers has been asked by the Company to agree, nor has any Purchaser agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) past or future open market or other transactions by any Purchaser, specifically including, without limitation, Short Sales or "derivative" transactions, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Company's publicly-traded securities; (iii) any Purchaser, and counter-parties in "derivative" transactions to which any such Purchaser is a party, directly or indirectly, presently may have a "short" position in the Common Stock, and (iv) each Purchaser shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction. The Company further understands and acknowledges that (y) one or more Purchasers may engage in hedging activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value of the Warrant Shares deliverable with respect to Securities are being determined, and (z) such hedging activities (if any) could reduce the value of the existing stockholders' equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.

(gg) Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Company's placement agent in connection with the placement of the Securities.

(hh) FDA. As to each product subject to the jurisdiction of the U.S. Food and Drug Administration ("FDA") under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder ("FDCA") that is manufactured, packaged, labeled, tested, distributed, sold, and/or marketed by the Company or any of its Subsidiaries (each such product, a "Pharmaceutical Product"), such Pharmaceutical Product is being manufactured, packaged, labeled, tested, distributed, sold and/or marketed by the Company in compliance with all applicable requirements under FDCA and similar laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, labeling, advertising, record keeping and filing of reports, except where the failure to be in compliance would not have a Material Adverse Effect. There is no pending, completed or, to the Company's knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory proceeding, charge, complaint, or investigation)

21

against the Company or any of its Subsidiaries, and none of the Company or any of its Subsidiaries has received any notice, warning letter or other communication from the FDA or any other governmental entity, which (i) contests the premarket clearance, licensure, registration, or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the sale of, or the labeling and promotion of any Pharmaceutical Product, (ii) withdraws its approval of, requests the recall, suspension, or seizure of, or withdraws or orders the withdrawal of advertising or sales promotional materials relating to, any Pharmaceutical Product, (iii) imposes a clinical hold on any clinical investigation by the Company or any of its Subsidiaries, (iv) enjoins production at any facility of the Company or any of its Subsidiaries, (v) enters or proposes to enter into a consent decree of permanent injunction with the Company or any of its Subsidiaries, or (vi) otherwise alleges any violation of any laws, rules or regulations by the Company or any of its Subsidiaries, and which, either individually or in the aggregate, would have a Material Adverse Effect. The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA. The Company has not been informed by the FDA that the FDA will prohibit the marketing, sale, license or use in the United States of any product proposed to be developed, produced or marketed by the Company nor has the FDA expressed any concern as to approving or clearing for marketing any product being developed or proposed to be developed by the Company.

(ii) Stock Option Plans. Each stock option granted by the Company under the Company's stock option plan was granted (i) in accordance with the terms of the Company's stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP and applicable law. No stock option granted under the Company's stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

(jj) Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

(kk) U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon Purchaser's request.

(ll) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries or Affiliates is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA") and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any

class of voting securities or twenty-five percent (25%) or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(mm) Money Laundering. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the "Money Laundering Laws"), and no Action or Proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.

3.2 Representations and Warranties of the Purchasers. Each Purchaser, for itself and for no other Purchaser, hereby represents and warrants as of the date hereof and as of the Closing Date to the Company as follows (unless as of a specific date therein, in which case they shall be accurate as of such date):

(a) Organization; Authority. Such Purchaser is either an individual or an entity duly incorporated or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or formation with full right, corporate, partnership, limited liability company or similar power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of the Transaction Documents and performance by such Purchaser of the transactions contemplated by the Transaction Documents have been duly authorized by all necessary corporate, partnership, limited liability company or similar action, as applicable, on the part of such Purchaser. Each Transaction Document to which it is a party has been duly executed by such Purchaser, and when delivered by such Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Purchaser, enforceable against it in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(b) Understandings or Arrangements. Such Purchaser is acquiring the Securities as principal for its own account and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Securities (this representation and warranty not limiting such Purchaser's right to sell the Securities pursuant to the Registration Statement or otherwise in compliance with applicable federal and state securities laws). Such Purchaser is acquiring the Securities hereunder in the ordinary course of its business.

(c) Purchaser Status. At the time such Purchaser was offered the Securities, it was, and as of the date hereof it is, and on each date on which it exercises any Warrants, it will be either: (i) an “accredited investor” as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Securities Act or (ii) a “qualified institutional buyer” as defined in Rule 144A(a) under the Securities Act.

(d) Experience of Such Purchaser. Such Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

(e) Access to Information. Such Purchaser acknowledges that it has had the opportunity to review the Transaction Documents (including all exhibits and schedules thereto) and the SEC Reports and has been afforded, (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to information about the Company and its financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment. Such Purchaser acknowledges and agrees that neither the Placement Agent nor any Affiliate of the Placement Agent has provided such Purchaser with any information or advice with respect to the Securities nor is such information or advice necessary or desired. Neither the Placement Agent nor any Affiliate has made or makes any representation as to the Company or the quality of the Securities and the Placement Agent and any Affiliate may have acquired non-public information with respect to the Company which such Purchaser agrees need not be provided to it. In connection with the issuance of the Securities to such Purchaser, neither the Placement Agent nor any of its Affiliates has acted as a financial advisor or fiduciary to such Purchaser.

(f) Certain Transactions and Confidentiality. Other than consummating the transactions contemplated hereunder, such Purchaser has not, nor has any Person acting on behalf of or pursuant to any understanding with such Purchaser, directly or indirectly executed any purchases or sales, including Short Sales, of the securities of the Company during the period commencing as of the time that such Purchaser first received a term sheet (written or oral) from the Company or any other Person representing the Company setting forth the material pricing terms of the transactions contemplated hereunder and ending immediately prior to the execution hereof. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser’s assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser’s assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement. Other than to

other Persons party to this Agreement or to such Purchaser's representatives, including, without limitation, its officers, directors, partners, legal and other advisors, employees, agents and Affiliates, such Purchaser has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

The Company acknowledges and agrees that the representations contained in this Section 3.2 shall not modify, amend or affect such Purchaser's right to rely on the Company's representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transactions contemplated hereby. Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

ARTICLE IV. OTHER AGREEMENTS OF THE PARTIES

4.1 Warrant Shares. If all or any portion of a Warrant is exercised at a time when there is an effective registration statement to cover the issuance or resale of the Warrant Shares or if the Warrant is exercised via cashless exercise, the Warrant Shares issued pursuant to any such exercise shall be issued free of all restrictive legends. If at any time following the date hereof the Registration Statement (or the Company's registration statement registering the sale or resale of the Common Warrant Shares is not effective or is not otherwise available for the sale or resale of the Warrant Shares, the Company shall immediately notify the holders of the applicable Warrants in writing that such registration statement is not then effective and thereafter shall promptly notify such holders when the registration statement is effective again and available for the sale or resale of the applicable Warrant Shares (it being understood and agreed that the foregoing shall not limit the ability of the Company to issue, or any Purchaser to sell, any of the Warrant Shares in compliance with applicable federal and state securities laws). The Company shall use best efforts to keep a registration statement (including the Registration Statement) registering the issuance or resale of the applicable Warrant Shares effective during the term of such Warrants.

4.2 Furnishing of Information. Until the earliest of the time that (i) no Purchaser owns Securities or (ii) the Warrants have expired, the Company covenants to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act even if the Company is not then subject to the reporting requirements of the Exchange Act.

4.3 Integration. The Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities for purposes of the rules and

regulations of any Trading Market such that it would require shareholder approval prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.

4.4 Securities Laws Disclosure; Publicity. The Company shall (a) by the Disclosure Time issue a press release disclosing the material terms of the transactions contemplated hereby, and (b) file a Current Report on Form 8-K, including the Transaction Documents as exhibits thereto (including by means of incorporation by reference), with the Commission within the time, and in the manner, required by the Exchange Act. From and after the issuance of such press release, the Company represents to the Purchasers that it shall have publicly disclosed all material, non-public information delivered to any of the Purchasers by the Company or any of its Subsidiaries, or any of their respective officers, directors, employees or agents in connection with the transactions contemplated by the Transaction Documents. In addition, effective upon the issuance of such press release, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, whether written or oral, between the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates on the one hand, and any of the Purchasers or any of their Affiliates on the other hand, shall terminate. The Company and each Purchaser shall consult with each other in issuing any other press releases with respect to the transactions contemplated hereby, and neither the Company nor any Purchaser shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of any Purchaser, or without the prior consent of each Purchaser, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law, in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. Notwithstanding the foregoing, the Company shall not publicly disclose the name of any Purchaser, or include the name of any Purchaser in any filing with the Commission or any regulatory agency or Trading Market, without the prior written consent of such Purchaser, except (a) as required by federal securities law in connection with the filing of final Transaction Documents with the Commission and (b) to the extent such disclosure is required by law or Trading Market regulations, in which case the Company shall provide the Purchasers with prior notice of such disclosure permitted under this clause (b).

4.5 Shareholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Purchaser is an “Acquiring Person” under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company, or that any Purchaser could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Securities under the Transaction Documents or under any other agreement between the Company and the Purchasers.

4.6 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, which shall be disclosed pursuant to Section 4.4, the Company covenants and agrees that neither it, nor any other Person acting on its behalf will provide any Purchaser or its agents or counsel with any information that constitutes, or the Company reasonably believes constitutes, material non-public information, unless prior thereto such Purchaser shall have consented to the receipt of such

information and agreed with the Company to keep such information confidential. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company. To the extent that the Company delivers any material, non-public information to a Purchaser without such Purchaser's consent, the Company hereby covenants and agrees that such Purchaser shall not have any duty of confidentiality to the Company, any of its Subsidiaries, or any of their respective officers, directors, agents, employees or Affiliates, or a duty to the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates not to trade on the basis of, such material, non-public information, provided that the Purchaser shall remain subject to applicable law. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

4.7 Use of Proceeds. The Company shall use the net proceeds from the sale of the Securities hereunder as disclosed in the Registration Statement and otherwise for working capital purposes and shall not use such proceeds: (a) [reserved], (b) for the settlement of any outstanding litigation or (c) in violation of FCPA or OFAC regulations.

4.8 Indemnification of Purchasers. Subject to the provisions of this Section 4.8, the Company will indemnify and hold each Purchaser and its directors, officers, shareholders, members, partners, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls such Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, shareholders, agents, members, partners or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a "Purchaser Party") harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents or (b) any action instituted against the Purchaser Parties in any capacity, or any of them or their respective Affiliates, by any stockholder of the Company who is not an Affiliate of such Purchaser Party, with respect to any of the transactions contemplated by the Transaction Documents (unless such action is based upon a material breach of such Purchaser Party's representations, warranties or covenants under the Transaction Documents or any agreements or understandings such Purchaser Party may have with any such stockholder or any violations by such Purchaser Party of state or federal securities laws or any conduct by such Purchaser Party which is finally judicially determined to constitute fraud, gross negligence or willful misconduct). If any action shall be brought against any Purchaser Party in respect of which indemnity may be sought pursuant to this Agreement, such Purchaser Party shall promptly notify the Company in writing, and the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Purchaser Party. Any Purchaser Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the

expense of such Purchaser Party except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of counsel, a material conflict on any material issue between the position of the Company and the position of such Purchaser Party, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel. The Company will not be liable to any Purchaser Party under this Agreement (y) for any settlement by a Purchaser Party effected without the Company's prior written consent, which shall not be unreasonably withheld or delayed; or (z) to the extent, but only to the extent that a loss, claim, damage or liability is attributable to any Purchaser Party's breach of any of the representations, warranties, covenants or agreements made by such Purchaser Party in this Agreement or in the other Transaction Documents. The indemnification required by this Section 4.8 shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or are incurred. The indemnity agreements contained herein shall be in addition to any cause of action or similar right of any Purchaser Party against the Company or others and any liabilities the Company may be subject to pursuant to law.

4.9 Listing of Common Stock. The Company hereby agrees to use best efforts to maintain the listing or quotation of the Common Stock on the Trading Market on which it is currently listed, and, subject to the Authorized Share Approval, concurrently with the Closing, the Company shall apply to list or quote all of the Shares and Warrant Shares (or such number of Warrant Shares underlying Warrants that are then exercisable) on such Trading Market and promptly secure the listing of all of such Shares and Warrant Shares on such Trading Market. The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the Shares and Warrant Shares, and will take such other action as is necessary to cause all of the Shares and Warrant Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then take all action reasonably necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules of the Trading Market. The Company agrees to maintain the eligibility of the Common Stock for electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

4.10 Subsequent Equity Sales.

(a) From the date hereof until ninety (90) days after the Closing Date, neither the Company nor any Subsidiary shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents.

(b) From the date hereof until the one (1) year anniversary of the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. "Variable Rate Transaction" means a transaction in which the Company (i)

issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit, whereby the Company may issue securities at a future determined price, other than any issuance or sale by the Company of debt securities convertible into shares of Common Stock for which the net proceeds thereof shall be principally used by the Company for the repayment of then-existing indebtedness or for its business operations (including any warrants issued in connection with, and shares of Common Stock issuable upon the conversion of, such debt securities). Any Purchaser shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(c) Notwithstanding the foregoing, this Section 4.10 shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance.

4.11 Equal Treatment of Purchasers. No consideration (including any modification of this Agreement) shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of this Agreement unless the same consideration is also offered to all of the parties to this Agreement. For clarification purposes, this provision constitutes a separate right granted to each Purchaser by the Company and negotiated separately by each Purchaser, and is intended for the Company to treat the Purchasers as a class and shall not in any way be construed as the Purchasers acting in concert or as a group with respect to the purchase, disposition or voting of Securities or otherwise.

4.12 Certain Transactions and Confidentiality. Each Purchaser, severally and not jointly with the other Purchasers, covenants that neither it nor any Affiliate acting on its behalf or pursuant to any understanding with it will execute any purchases or sales, including Short Sales of any of the Company's securities during the period commencing with the execution of this Agreement and ending at such time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4. Each Purchaser, severally and not jointly with the other Purchasers, covenants that until such time as the transactions contemplated by this Agreement are publicly disclosed by the Company pursuant to the initial press release as described in Section 4.4, such Purchaser will maintain the confidentiality of the existence and terms of this transaction and the information included in the Disclosure Schedules. Notwithstanding the foregoing and notwithstanding anything contained in this Agreement to the contrary, the Company expressly acknowledges and agrees that (i) no Purchaser makes any representation, warranty or covenant hereby that it will not engage in effecting transactions in any securities of the Company after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release

as described in Section 4.4, (ii) no Purchaser shall be restricted or prohibited from effecting any transactions in any securities of the Company in accordance with applicable securities laws from and after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4 and (iii) no Purchaser shall have any duty of confidentiality or duty not to trade in the securities of the Company to the Company or its Subsidiaries after the issuance of the initial press release as described in Section 4.4. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser's assets, the covenant set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement.

4.13 Exercise Procedures. The form of Notice of Exercise included in the Warrants set forth the totality of the procedures required of the Purchasers in order to exercise the Warrants. No additional legal opinion, other information or instructions shall be required of the Purchasers to exercise their Warrants. Without limiting the preceding sentences, no ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required in order to exercise the Warrants. The Company shall honor exercises of the Warrants, and shall deliver Warrant Shares, in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

4.14 Authorized Share Increase. The Company shall hold an annual or special meeting of stockholders within 90 calendar days of the date hereof for the purpose of obtaining Authorized Share Approval, with the recommendation of the Company's Board of Directors that such proposal is approved, and the Company shall solicit proxies from its stockholders in connection therewith in the same manner as all other management proposals in such proxy statement and, to the fullest extent permitted by applicable law, all management-appointed proxyholders shall vote their proxies in favor of such proposal. If the Company does not obtain Authorized Share Approval at the first such meeting, the Company shall, to the fullest extent permitted by applicable law, call a meeting every period of approximately four (4) months thereafter to seek Authorized Share Approval until the date on which Authorized Share Approval is obtained.

ARTICLE V. MISCELLANEOUS

5.1 Termination. This Agreement may be terminated by any Purchaser, as to such Purchaser's obligations hereunder only and without any effect whatsoever on the obligations between the Company and the other Purchasers, by written notice to the other parties, if the Closing has not been consummated on or before the fifth (5th) Trading Day following the date hereof; provided, however, that no such termination will affect the right of any party to sue for any breach by any other party (or parties).

30

5.2 Fees and Expenses. Except as expressly set forth in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees (including, without limitation, any fees required for same-day processing of any instruction letter delivered by the Company and any exercise notice delivered by a Purchaser), stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchasers.

5.3 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, the Preliminary Prospectus and the Prospectus, contain the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules.

5.4 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email attachment at the email address as set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email attachment at the email address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2nd) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

5.5 Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and Purchasers which purchased at least 50.1% in interest of the Shares based on the initial Subscription Amounts hereunder or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought, provided that if any amendment, modification or waiver disproportionately and adversely impacts a Purchaser (or group of Purchasers), the consent of such disproportionately impacted Purchaser (or group of Purchasers) shall also be required. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right. Any proposed amendment or waiver that disproportionately, materially and adversely affects the rights and obligations of any Purchaser relative to the comparable rights and obligations of the other Purchasers shall require the prior written consent of such adversely affected Purchaser. Any amendment effected in accordance

31

with this Section 5.5 shall be binding upon each Purchaser and holder of Securities and the Company.

5.6 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

5.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger). Any Purchaser may assign any or all of its rights under this Agreement to any Person to whom such Purchaser assigns or transfers any Securities, provided that such transferee agrees in writing to be bound, with respect to the transferred Securities, by the provisions of the Transaction Documents that apply to the "Purchasers."

5.8 No Third-Party Beneficiaries. The Placement Agent shall be the third party beneficiary of the representations and warranties of the Company in Section 3.1 and the representations and warranties of the Purchasers in Section 3.2. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as otherwise set forth in Section 4.8 and this Section 5.8.

5.9 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Action or Proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such Action or Proceeding is improper or is an inconvenient venue for such Proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such Action or Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If any party shall commence an Action or Proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company under Section 4.8, the prevailing party in such Action or Proceeding shall be reimbursed by the non-prevailing party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Action or Proceeding.

5.10 Survival. The representations and warranties contained herein shall survive the Closing and the delivery of the Securities for a period of no longer than three years from the Closing.

5.11 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or “.pdf” signature page were an original thereof.

5.12 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

5.13 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights; provided, however, that in the case of a rescission of an exercise of a Warrant, the applicable Purchaser shall be required to return any shares of Common Stock subject to any such rescinded exercise notice concurrently with the return to such Purchaser of the aggregate exercise price paid to the Company for such shares and the restoration of such Purchaser’s right to acquire such shares pursuant to such Purchaser’s Warrant (including, issuance of a replacement warrant certificate evidencing such restored right).

5.14 Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Securities.

5.15 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any Action for specific performance of any such obligation the defense that a remedy at law would be adequate.

5.16 Payment Set Aside. To the extent that the Company makes a payment or payments to any Purchaser pursuant to any Transaction Document or a Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

5.17 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights including, without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any Proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. For reasons of administrative convenience only, each Purchaser and its respective counsel have chosen to communicate with the Company through EGS. EGS does not represent any of the Purchasers and only represents the Placement Agent. The Company has elected to provide all Purchasers with the same terms and Transaction Documents for the convenience of the Company and not because it was required or requested to do so by any of the Purchasers. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers.

5.18 Liquidated Damages. The Company's obligations to pay any partial liquidated damages or other amounts owing under the Transaction Documents is a continuing obligation of the Company and shall not terminate until all unpaid partial liquidated damages and other amounts have been paid notwithstanding the fact that the instrument or security pursuant to

which such partial liquidated damages or other amounts are due and payable shall have been canceled.

5.19 Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

5.20 Construction. The parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and shares of Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

5.21 **WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVES FOREVER TRIAL BY JURY.**

(Signature Pages Follow)

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

VIVUS, INC.

Address for Notice:

By: _____

Name:

E-Mail:

Title:

With a copy to (which shall not constitute notice):

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGE FOR PURCHASER FOLLOWS]

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: _____

Signature of Authorized Signatory of Purchaser: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Email Address of Authorized Signatory: _____

Facsimile Number of Authorized Signatory: _____

Address for Notice to Purchaser:

Address for Delivery of Warrants to Purchaser (if not same as address for notice):

Common Subscription Amount: \$

· Shares:

· Common Warrant Shares: Beneficial Ownership Blocker o 4.99% or o 9.99%

Pre-Funded Subscription Amount: \$

· Pre-Funded Warrant Shares: Beneficial Ownership Blocker o 4.99% or o 9.99%

· Common Warrant Shares:

EIN Number:

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Prospectus constituting a part of this Amendment No. 1 to Registration Statement on Form S-1 of our report dated March 3, 2020 (which report expresses an unqualified opinion and includes an explanatory paragraph related to substantial doubt about the Company's ability to continue as a going concern) relating to the consolidated financial statements and financial statement schedule of VIVUS, Inc., which appears in VIVUS, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2019.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ OUM & Co. LLP

San Francisco, California
June 19, 2020
