

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

AMENDMENT NO. 2
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

HEARTBEAM, INC.

(Exact name of Registrant as specified in its charter)

Delaware	541714	47-4881450
<i>(State or other jurisdiction of incorporation or organization)</i>	<i>(Primary Standard Industrial Classification Code Number)</i>	<i>(I.R.S. Employer Identification No.)</i>

**2118 Walsh Avenue, Suite 210
Santa Clara, CA 95050
Telephone: 408-899-4443**

(Address and telephone number of principal executive offices)

**Branislav Vajdic
Chief Executive Officer
HeartBeam, Inc.**

**2118 Walsh Avenue, Suite 210
Santa Clara, CA 95050
Telephone: 408-899-4443**

(Name, address and telephone number of agent for service)

Copies to:

Joseph M. Lucosky, Esq. Soyoung Lee, Esq. Lucosky Brookman LLP 101 Wood Avenue South, 5th Floor Woodbridge, NJ 08830 (732) 395-4400	Andrew D. Hudders, Esq. Carl Vandemark, Esq. Golenbock Eiseman Assor Bell & Peskoe, LLP 711 Third Avenue — 17th Floor New York, New York 10017 (212) 907-7300
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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, 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, a 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. (Check one):

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input type="checkbox"/>
Non-accelerated filer <input checked="" type="checkbox"/>	Smaller reporting company <input checked="" type="checkbox"/>
	Emerging growth company <input checked="" type="checkbox"/>

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

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 the 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. These securities may not be sold 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 it is not soliciting an offer to buy these securities in any state or jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED APRIL 17, 2023

PRELIMINARY PROSPECTUS



HeartBeam, Inc.

16,666,666

Shares of Common Stock

We are offering up to 16,666,666 shares of common stock, par value .0001 (the "Common Stock") of HeartBeam, Inc. (the "Company" or "HeartBeam") at a public offering price of \$1.50 per share. This is a "best efforts" offering. This offering will terminate on May 18, 2023 unless we decide to terminate the offering prior to that date. Prior to the termination date, we may extend the offering to May 25, 2023. We will have one closing for all the securities purchased in this offering.

Public Ventures, LLC (the "placement agent") is the placement agent we have engaged to conduct this offering on a commercially reasonable "best efforts" offering basis, with no minimum amount. The placement agent may engage sub-placement agents to assist in the placement of the shares of Common Stock offered hereby. The placement agent is not purchasing or selling any shares of Common Stock offered by this prospectus, but it has agreed to use its commercially reasonable best efforts to find eligible purchasers for the shares of Common Stock offered hereby. While the offering is ongoing, investors may submit subscription agreements to the placement agent. Any funds paid by investors pursuant to the subscription agreements will be paid to and held in escrow pursuant to an escrow agreement with Delaware Trust Company, which will act as escrow agent, until the closing date of this offering. Subscriptions are irrevocable, and subscribers cannot withdraw their funds during the offering period. See "Plan of Distribution" for more details about the offering, the process of subscriptions, subscription agreements and the escrow arrangements.

Our Common Stock and warrants are currently listed on the NASDAQ, under the symbol "BEAT" and "BEATW", respectively.

Investing in our securities is highly speculative and involves a high degree of risk. **You should carefully consider the risks and uncertainties described under the heading "Risk Factors" beginning on page 15 of this prospectus before making a decision to purchase our securities.**

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

	Per Share		Total
Public offering price	\$	1.50	\$ 24,999,999
Placement Agent fees	\$	0.09525	\$ 1,587,500
Proceeds to HeartBeam, Inc. before expenses	\$	1.40475	\$ 23,412,499

For a description of the other compensation to be received by the placement agent, please see "Plan of Distribution" beginning on page 25.

The delivery of the securities offered hereby is expected to be made on or about the termination date of the offering, which will be May 18, 2023, subject to satisfaction of certain customary closing conditions. Prior to the termination date, we may extend the offering to May 25, 2023.

PUBLIC VENTURES, LLC

The date of this prospectus , 2023.

ABOUT THIS PROSPECTUS

In this prospectus, unless the context suggests otherwise, references to “the Company,” “HeartBeam”, “we,” “us,” and “our” refer to HeartBeam, Inc.

This prospectus describes the specific details regarding this offering, the terms and conditions of the Shares being offered hereby and the risks of investing in the Company’s Common Stock. You should read this prospectus and the additional information about the Company described in the section entitled “Where You Can Find More Information” before making your investment decision.

Neither the Company, nor any of its officers, directors, agents, representatives or placement agents, make any representation to you about the legality of an investment in the Company’s Common Stock. You should not interpret the contents of this prospectus to be legal, business, investment or tax advice. You should consult with your own advisors for that type of advice and consult with them about the legal, tax, business, financial and other issues that you should consider before investing in the Company’s securities.

ADDITIONAL INFORMATION

You should rely only on the information contained in this prospectus and in any accompanying prospectus supplement. No one has been authorized to provide you with different or additional information. The shares of Common Stock are not being offered in any jurisdiction where the offer is not permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of such documents.

TRADEMARKS AND TRADE NAMES

This prospectus includes trademarks that are protected under applicable intellectual property laws and are the Company’s property. This prospectus also contains trademarks, service marks, trade names and/or copyrights of other companies, which are the property of its owners. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that the Company will not assert, to the fullest extent under applicable law, its rights or the right of the applicable licensor to these trademarks and trade names.

INDUSTRY AND MARKET DATA

Unless otherwise indicated, information contained in this prospectus concerning the Company’s industry and the markets in which it operates, including market position and market opportunity, is based on information from management’s estimates, as well as from industry publications and research, surveys and studies conducted by third parties. The third-party sources from which the Company has obtained information generally state that the information contained therein has been obtained from sources believed to be reliable, but the Company cannot assure you that this information is accurate or complete. The Company has not independently verified any of the data from third-party sources nor has it verified the underlying economic assumptions relied upon by those third parties. Similarly, internal company surveys, industry forecasts and market research, which the Company believes to be reliable, based upon management’s knowledge of the industry, have not been verified by any independent sources. The Company’s internal surveys are based on data it has collected over the past several years, which it believes to be reliable. Management estimates are derived from publicly available information, its knowledge of the industry, and assumptions based on such information and knowledge, which management believes to be reasonable and appropriate. However, assumptions and estimates of the Company’s future performance, and the future performance of its industry, are subject to numerous known and unknown risks and uncertainties, including those described under the heading “Risk Factors” in this prospectus and those described elsewhere in this prospectus, and the other documents the Company files with the Securities and Exchange Commission, or SEC, from time to time. These and other important factors could result in its estimates and assumptions being materially different from future results. You should read the information contained in this prospectus completely and with the understanding that future results may be materially different and worse from what the Company expects. See the information included under the heading “Forward-Looking Statements.”

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. These forward-looking statements contain information about our expectations, beliefs or intentions regarding our product development and commercialization efforts, business, financial condition, results of operations, strategies or prospects, and other similar matters. These forward-looking statements are based on management's current expectations and assumptions about future events, which are inherently subject to uncertainties, risks and changes in circumstances that are difficult to predict. These statements may be identified by words such as "expects," "plans," "projects," "will," "may," "anticipates," "believes," "should," "intends," "estimates," and other words of similar meaning.

These statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the section titled "Risk Factors" and elsewhere in this prospectus, in any related prospectus supplement and in any related free writing prospectus.

Any forward-looking statement in this prospectus, in any related prospectus supplement and in any related free writing prospectus reflects our current view with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our business, results of operations, industry and future growth. Given these uncertainties, you should not place undue reliance on these forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this prospectus, any related prospectus supplement and any related free writing prospectus and the documents that we reference herein and therein and have filed as exhibits hereto and thereto completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

This prospectus, any related prospectus supplement and any related free writing prospectus also contain or may contain estimates, projections and other information concerning our industry, our business and the markets for our products, including data regarding the estimated size of those markets and their projected growth rates. Information that is based on estimates, forecasts, projections or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained these industry, business, market and other data from reports, research surveys, studies and similar data prepared by third parties, industry and general publications, government data and similar sources. In some cases, we do not expressly refer to the sources from which these data are derived.

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PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus or incorporated by reference in this prospectus. This summary may not contain all of the information that may be important to you. You should read this entire prospectus carefully, including the sections entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the Company’s historical financial statements and related notes included elsewhere in this prospectus. In this prospectus, unless otherwise noted, the terms “the Company,” “HeartBeam” “we,” “us,” and “our” refer to HeartBeam, Inc.

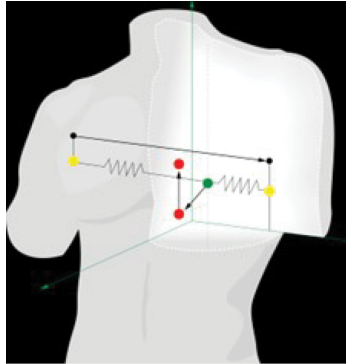
Overview

Corporate History and Information

HeartBeam was incorporated as a C corporation under the laws of the State of Delaware on June 11, 2015. We do not own any subsidiaries.

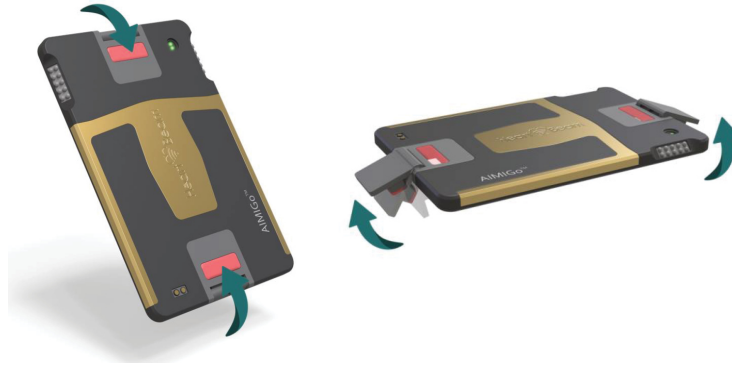
Company Overview

We are a medical technology company primarily focusing on developing and commercializing higher resolution ambulatory Electrocardiogram (“ECG”) solutions that enable the detection and monitoring of cardiac disease both inside and outside a healthcare facility setting. Our ability to develop higher resolution ECG solutions is achieved through the development of our proprietary and patented Vector Electrocardiography (“VECG”) technology platform. Our VECG is capable of developing three-dimensional (“3D”) vector images of cardiac electrical activity by displaying the spatial locations of ECG waveforms that demonstrated in early studies to deliver equal or superior diagnostic capability than traditional hospital-based ECG systems.



Our aim is to deliver innovative, ambulatory cardiac health monitoring technologies that can be used for patients anywhere, especially where critical cardiac care decisions need to be made on a more timely basis. Our products (hereinafter “Product” or “Products”) require Food and Drug Administration (“FDA”) clearance and have not been cleared for marketing.

We believe our Products and services will benefit many stakeholders, including patients, healthcare providers, and healthcare payors. We are developing our telehealth Product (“HeartBeam AIMIGo™”), to address the rapidly growing telehealth market. HeartBeam AIMIGo is comprised of a credit card sized electrocardiogram device and powerful cloud-based diagnostic expert software systems. We intend to show that our easy to use device (without external electrodes) provides signals equivalent to a standard 12L device, and therefore will have a number of applications for ambulatory use. We believe that we are uniquely positioned to play a central role in cardiac remote monitoring including high-risk coronary artery disease patients, because the initial studies have shown that our ischemia detection system may be more accurate than existing ambulatory monitoring solutions. Coronary artery disease (“CAD”) patients are at increased risk for a heart attack or Myocardial Infarction (“MI”).



HeartBeam AIMiGo device in planar and ready position

We are also applying our software platform to create a tool for detecting heart attacks in the Emergency Department (“ED”) environment using standard 12-lead ECG recordings. The software tool, (“HeartBeam AIMI™”) is designed to enable emergency physicians diagnose heart attacks more accurately and quickly than currently available tools. Market clearance of this Product is planned to precede HeartBeam AIMiGo.

To date, we have developed working prototypes for both HeartBeam AIMiGo and HeartBeam AIMI. HeartBeam AIMI has been submitted for FDA 510(k) clearance and we have received questions from the FDA within the statutory 30-day review deadline, discussed the questions via teleconference with the FDA review team and provided written responses addressing the questions to the primary reviewer.

The custom software and hardware of our Products, we believe, are classified as Class II medical devices by the FDA, running on an FDA approved Class I registered software platform. Class II medical devices are those for which general controls alone are insufficient to provide reasonable assurance of safety and effectiveness and there is sufficient information to establish special controls. Special controls can include performance standards, post-market surveillance, patient histories and FDA guidance documents. Premarket review and clearance by the FDA for these devices is generally accomplished through the 510(k) or 510(k) de-novo premarket notification process.

HeartBeam has nine issued U.S. patents (U.S. 10,433,744, U.S. 10,117,592, U.S. 11,071,490, U.S. 11,419,538, U.S. 11,445,963, U.S. 11,529,085, U.S. 10,980,433, U.S. 11,412,972 and U.S. 11,234,658), and six pending U.S. applications. Four of the pending applications have been published, the remaining two pending cases are unpublished. Outside of the U.S., HeartBeam has four issued patents in Germany, France, Netherlands and United Kingdom and seven pending applications in Canada, China, the European Union, Japan and Australia. HeartBeam has three pending PCT applications. The issued patents are predicted to expire between April 11, 2036 and April 21, 2042.

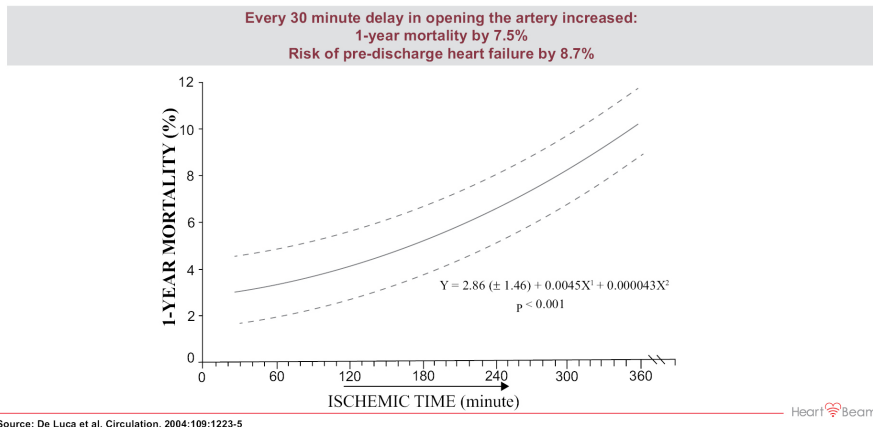
Market Overview

Chronic diseases are the number one burden on the healthcare system, driving up costs each year, and cardiovascular illnesses are one of the top contributors. Regulators, payors, and providers are focused on shifting the diagnosis and management of these conditions to drive better outcomes at lower cost. Connected medical solutions are expanding rapidly and are projected to reach \$155 billion by 2026, a compound annual growth rate (“CAGR”) of 17%. These solutions are socio-technical models for healthcare management and delivery using technology to provide healthcare services remotely and aim to maximize healthcare resources and provide increased, flexible capabilities for patients to engage with clinicians and better self-manage their care, using readily available consumer-facing technologies to deliver patient care outside the hospital or doctor’s office.

The market for Remote Patient Monitoring (“RPM”) is projected to reach \$31.3 billion by 2023. In 2019, 1,800 hospitals in the US were using mobile applications to improve risk management and quality of care. The number in 2020 was likely larger as the onset of the COVID-19 pandemic greatly accelerated use and acceptance of telehealth by both patients and healthcare providers.

Cardiovascular disease is the number one cost to the healthcare system and is estimated to be responsible for 1 in every 6 healthcare dollars spent in the US. As cardiovascular disease is the leading cause of death worldwide, early detection, diagnosis, and management of chronic cardiac conditions are necessary to relieve the increasing burden on the healthcare infrastructure. Diagnostic tests such as ECGs are used to detect, diagnose, and track numerous cardiovascular conditions. With advances in mobile communications, diagnostic monitoring of cardiac conditions is increasingly occurring outside the hospital.

Consequences of Delayed Intervention in MI Patients



We intend to show that our easy to use device (without external electrodes) provides signals equivalent to a standard 12L device, and therefore will have a number of applications for ambulatory use. Our initial telemedicine technology Product HeartBeam AIMiGo will first address the heart attack detection market as well as the market to monitor CAD patients who are typically at high risk for a heart attack. Additionally, we expect to cater to patients across different risk profiles interested in our cardiac monitoring solutions for different heart conditions. Currently there are no products on the market that are user friendly, easy to carry, and always with the patient to provide physicians and patients with timely and highly accurate information about all heart conditions that could be detected with a 12L ECG, including potential ischemic events. A tool that is always with the patient, that decreases time to intervention, and that decreases the number of unnecessary ED visits by chest pain patients would have a significant effect on saving lives and healthcare dollars. We believe our technology will address this problem and will provide a convenient, cost-effective, integrated telehealth solution, including software and hardware for physicians and their patients. There are approximately 20 million people in the US who are considered at high risk for a heart attack, including 8 million who already have had prior intervention for MI’s and are therefore considered to be at extreme risk.

In the US, mobile cardiac tests are primarily conducted through outsourced Independent Diagnostic Testing Facilities (“IDTFs”) or as part of an RPM/telehealth system. Reimbursement rates vary depending on the use case and generally are based on the value a technology offers to patients and healthcare providers. Actual reimbursed pricing is set by the Centers for Medicare & Medicaid Services (“CMS”). Reimbursement rates for private insurers typically provide for similar or higher reimbursement rates when compared to those set by the government for Medicare and Medicaid.

In the ED environment, early and accurate diagnosis of a chest pain patient who is potentially having a heart attack is of immense importance. Guidelines state that every chest pain patient in an ED must receive an ECG within 10 minutes of presentation. The accuracy of these initial ECGs, interpreted by physicians, is only approximately 75%. The need

for increased ECG accuracy in detecting a heart attack in the ED is well defined, and an improved solution could result in saved lives and healthcare dollars. A 510(k) for our ED Product, HeartBeam AIMI, was submitted for review on August 15, 2022 to the FDA. We believe this Product will offer an increase in the accuracy of heart attack detection in EDs. There are approximately 5,000 Emergency Departments in the US.

Products and Technology

The foundation of our novel technology is the concept of VECG, a technology that has long been seen as superior to ECGs in detecting MIs but is no longer used clinically because of the difficulty experienced by physicians interpreting the output. We solved the crucial problem of recording three orthogonal (x, y and z) projections of the heart vector with a device that is sized like a credit card. The thickness of our credit card sized ECG signal collection device is about 1/8 inch (4 mm), and it weighs about 1 ounce (28 grams). The core technology consists of a series of patented inventions and associated algorithms. In addition to using VECG to get a more complete 3D characterization of cardiac activity, we use the concept of a baseline. Our MI marker is a differential marker that measures the change in cardiac parameters between an asymptomatic (baseline) recording and the symptomatic recording. It is personalized for every patient as every patient has a unique baseline. Our increase in diagnostic performance in detecting MIs, when compared to a panel of cardiologists, is attributed to a richer cardiac information set offered by VECG and the fact that our MI marker compares the baseline and symptomatic recordings and does that in the 3D space of VECG.

This novel technology has resulted in two key Products to date: a telehealth Product for cardiovascular patients (HeartBeam AIMIGo) and a powerful cloud-based ECG interpretation based on a quantitative comparison of the patients 3D VECG baseline and symptomatic recordings for EDs (HeartBeam AIMI). Our telehealth ECG collection device is the size of a credit card and records cardiac signals with integrated electrodes rather than wires or self-adhesive electrodes. Unlike a standard 12-lead ECG machine that records signals in empirically determined locations on a human body, our approach is focused on recording three projections of the heart vector. The successful recording of the projections of the heart vector enables the synthesis, via a patented method, of a 12-lead signal set and internal algorithmic diagnostic work in the space of 3D heart vectors.

There are obvious ease of use advantages when comparing our handheld device that fits in a wallet and can be instantly self-applied versus the current 12-lead ECG machine that requires a trained professional to apply. In addition, there are diagnostic performance advantages, including, based on our initial study, increased accuracy in diagnosing MIs. The system is used by patients at home or elsewhere, and collected data is sent to a physician to assess whether the patient's chest pain is truly the result of an MI.

Our telehealth HeartBeam AIMIGo system will be a prescription-only mobile health system intended for individuals with known or suspected heart disease, especially CAD. It helps guide physicians in choosing the best course of action for their patients who experience chest pain outside of a medical facility. HeartBeam AIMIGo will bring a medical grade ECG to patients and will enable them to receive a plan of action from a physician in a timely manner. At the time of onboarding and at regularly scheduled time intervals, patients record a baseline 30 second cardiac reading using our device. When a patient experiences symptoms, such as irregular heartbeats or chest pain, the patient can simply open the smartphone application and press the credit card sized device against the chest to collect signals that can be converted to a synthesized 12-lead ECG. This synthesized 12-lead ECG is sent to the physician overlaid with the patient's synthesized baseline ECG recording. In addition, the patient provides input on their symptoms that is sent, along with the ECG data, to the cloud for interpretation by a physician. A cloud-based algorithm processes the signals and displays the symptom description and patient history to a physician to analyze and prescribe an action plan. From start to finish, the process takes just a few minutes.

The telehealth HeartBeam AIMIGo system consists of a number of capabilities that will be productized in an incremental fashion. These are:

1. A credit card sized cardiac electrical signal collection device. The device captures cardiac signals that represent x, y and z projections of the heart vector and transmits them via Bluetooth connection to a smartphone. It is always with the patient as it easily fits in a wallet. It is easy to use as all that is required of the patient is that the device be pressed against the chest.
2. A smartphone application that receives the cardiac signals from the HeartBeam signal collection device. The application has several functions: guiding the patient through the signal collection, asking about symptoms, displaying the status of the data collection including real time signal quality check, and notifying

the patient of the plan of action as determined by a physician. In addition, the application will contain HIPAA-compliant video conferencing or text capabilities for the healthcare provider to communicate directly with the patient.

3. A cloud-based software system that serves four basic functions: (1) Performing a final check of the ECG signal quality, (2) Synthesizing a 12-lead ECG from the measured (recorded) 3 vector leads, (3) Creating a diagnostic suggestion based on 3D VECG interpretation, risk factors and symptoms and (4) Preparing a summary report for the physician. These software functions will be introduced to the HeartBeam AIMIGo product in a sequential manner. To facilitate a more accurate physician interpretation of the data, the software overlays the patient's synthesized baseline 12 lead ECG waveform on the synthesized 12 lead ECG waveform from the current event. To ensure high signal quality, the system checks for noise levels in the recorded signals. Those signals that can be effectively filtered are accepted and those that have a noise level above an empirically established threshold are rejected. If a recorded signal is rejected, the user is asked to repeat the recording.
4. A web-based physician portal capable of displaying the following relevant information for the physician to analyze: diagnostic suggestion, patient history, symptoms, baseline and current, synthesized 12-lead ECG, and recorded 3 vector leads. Our physician portal assists physicians with their diagnostic interpretation by providing both the baseline 12-lead synthesized ECG and the 12-lead synthesized ECG that is under evaluation.
5. A dedicated ECG monitoring and reading team of medical professionals to offer 24/7/365 services in order to assist symptomatic patients when making a decision of whether they should go to the Emergency Department. This capability will be developed in-house or outsourced through a contracted third-party organization.

The market release of our telehealth Product will be in multiple versions.

The initial Product will have a limited feature set and introduce a 3-lead 3D VECG credit card-sized device, the HeartBeam AIMIGo 3L, that records the X,Y,Z cardiac activity and displays the signals for clinician review, providing the regulatory foundation for subsequent products in our product portfolio. The 510(k) submission to the FDA is planned for early 2023.

Following this we will offer to the physician a pair of baseline and symptomatic 12lead ECGs, both synthesized from 3-lead 3D VECG signals recorded by the HeartBeam AIMIGo device, and a symptoms report. It leverages recently issued patents for a personalized system for synthesizing 12-lead ECG waveforms. The 510(k) submission to the FDA is planned for late 2023.

Future versions may include our proprietary ECG interpretation MI marker and our overall MI diagnostic suggestion in addition to all features of the earlier Products and may as well offer an automated atrial fibrillation detection algorithm.

The same core technology built into the telehealth Product HeartBeam AIMIGo is used in the ED Product HeartBeam AIMI. In this application, the increased accuracy of detecting MIs by the ECG is of utmost importance. An ECG is the first diagnostic test a chest pain patient receives in the ED and it has a major impact on the patient's subsequent clinical path. The ED Product has no hardware and introduces minimal change to the standard of care chest pain diagnostic path. It uses a baseline standard 12-lead ECG from the patient's Electronic Medical Record ("EMR") and the standard 12-lead ECG that is being evaluated. It converts the two ECGs to a VECG representation and utilizes our proprietary 3D VECG differential marker to generate an ECG interpretation suggestion to be used by the ED physician. The importance of increased accuracy of the first ECG interpretation for a chest pain patient presenting to an ED is significant, potentially leading to faster intervention or avoiding unnecessary activation of the cardiac catheterization lab.

FDA Regulatory Path

We have defined the FDA 510(k) clearance paths for both Products and have contracted with regulatory consultants to help us clear both products with the FDA.

The initial Product will have a limited feature set and introduce a 3-lead 3D VECG credit card-sized device, the HeartBeam AIMiGo 3L, that records the X, Y, Z cardiac activity and displays the signals for clinician review, providing the regulatory foundation for subsequent products in our product portfolio.

The 510(k) submission to the FDA is planned for early Q2 2023. We are planning a subsequent 510(k) submission, in Q4 2023, for the Product, which will include the ability to generate synthesized 12L ECG recordings. The submission is planned to contain results of a validation study comparing our synthesized 12-lead ECG recordings to standard 12-lead ECG recordings.

HeartBeam's ED software product, HeartBeam AIMI, is hosted on LIVMOR's Class I registered software platform and a predicate device for the cloud-based diagnostic engine for the ED product was identified. The predicate device is widely used as part of a software package produced by a leading ECG machine manufacturer. The predicate device software makes a diagnostic suggestion regarding a potential MI diagnosis. HeartBeam AIMI will also make a diagnostic suggestion to the ED physician. In the HIDES pilot study, we showed improved performance in detecting ischemia over a panel of cardiologists.

For the FDA 510(k) regulatory submission, a retrospective study was performed comparing patients' baseline and asymptomatic ECG recordings and providing a diagnostic suggestion from the HeartBeam AIMI software. The diagnostic suggestion of the predicate device software, that was already recorded in the patient's EMR, was compared to the diagnostic suggestion of our Product. The 510(k) regulatory submission for market clearance was filed with the FDA on August 15, 2022.

Market Opportunity

ECGs are key diagnostic tests utilized in the diagnosis and monitoring of cardiovascular disease, the number one cause of death worldwide. In the US in 2016, there were approximately 120 million adults living with cardiovascular disease and approximately 20 million adults with diagnosed coronary artery disease. The prevalence of these cardiac conditions and thus the market size is increasing, due to an aging population and lifestyle choices.

Every 40 seconds someone in the US has a heart attack, or MI. Unfortunately, there is no way for patients to tell whether the symptoms they are experiencing are due to an MI, or some other more benign condition such as indigestion. As a result, patients often ignore symptoms and delay seeking care, which leads to worse outcomes and increased mortality. On the other hand, many patients who go to the ED with chest pain are not experiencing an MI. Chest pain is the second most common reason for an ED visit in patients over 45, yet fewer than 20% of chest pain ED visits result in a diagnosis of a life-threatening condition. These unnecessary ED visits lead to well over \$10 billion in unnecessary healthcare expenditures.

Most ECGs are conducted in a healthcare facility setting using a 12-lead ECG machine, the gold standard. ECGs taken outside of healthcare facilities are expected to grow more quickly than in-hospital ECGs. Monitoring cardiac patients outside of a hospital is a fast-growing trend, as it is less expensive and provides a better patient experience. However, while ambulatory cardiac monitoring devices are often much easier for patients to use, they have fewer leads than the gold standard and therefore cannot offer as comprehensive a picture of cardiac health.

While a standard 12-lead ECG readout is of great medical value, it is simply impractical to have a standard 12 lead machine next to patients when they experience symptoms outside the clinical setting, since recording the event requires attaching multiple electrodes to the patient's body with professional assistance. While existing technologies use predominantly single lead ECG devices to monitor arrhythmias, these technologies do not provide information to the physician on the presence of life-threatening conditions of acute coronary syndrome ("ACS") or heart attacks.

We believe our telehealth technology addresses these market needs and has several key attributes that make it a good fit for these patients. Our telehealth Product is generally used when symptoms occur and offers the potential for lifelong patient usage. The device is practically always near the patient and ready to be used for recording a cardiac event. It enables very nearly real-time cardiac data transmission during a telemedicine visit. It offers a recorded 3 vector lead

set of signals and a synthesized 12-lead ECG set of signals. We believe physicians will typically prescribe our solution to chronic cardiovascular patients for long term monitoring, thereby enabling prolonged data collection and delivering a more complete picture for diagnosis. This will also enable the use of artificial intelligence on our future database that will have a unique set of longitudinal synthesized 12-lead ECGs for patients.

As our VECG platform demonstrates 12-Lead equivalence and clinical & cost-effectiveness advantages, coupled with a patent protected technology, we believe this might open multiple licensing and/or partnering opportunities with players in the ECG, cardiac monitoring patch and smart watch verticals.

Market Strategy

Our goal is to establish our products as key solutions for cardiology practices and hospital EDs. Our efforts to enter the market involve establishing clinical evidence and demonstrating the cost-effectiveness of adopting our products. For both the telehealth (HeartBeam AIMIGo) and the ED Products (HeartBeam AIMI), the initial geographic market is the United States.

We believe that both the telehealth and ED Products will be subject to the US FDA's 510(k) review process. A 510(k) for our HeartBeam AIMI was submitted to the FDA on August 15, 2022, for review and we are in the process of preparing a 510(k) submission for HeartBeam AIMIGo.

For HeartBeam AIMIGo, the primary customers are cardiology practices and the cardiology departments of hospitals. Healthcare insurers are another important customer, as they will potentially benefit from the reduced costs to the healthcare system. We are working to develop new clinical studies and publish results of completed clinical studies and plan to demonstrate real world cost-effectiveness of the use of the solution.

Our initial targets for HeartBeam AIMIGo are market segments that see value in an easy-to-use device that can generate synthesized 12L ECG recordings. These will be segments in which payment for the device will be outside of the established reimbursement system. These target segments include concierge practices, hospital-at-home segment and clinical trials. As we establish clinical data on the clinical and cost-effectiveness of HeartBeam AIMIGo, we will target at-risk cardiology practices, including high risk patients being discharged from hospitals after experiencing an MI.

Our long-term strategy is to generate sufficient evidence of clinical efficacy and cost-effectiveness to generate reimbursement coverage and payment specifically for the HeartBeam AIMIGo solution. We expect to be able to demonstrate significant clinical benefits for patients and savings to the healthcare system, justifying appropriate reimbursement levels.

For the telehealth Product, our primary marketing strategy will focus on the medical community with continued validation of clinical efficacy and cost-effectiveness and the establishment of reference sites. We will also create educational materials and provide other support to help educate our customers' patients.

We will explore other business models. For example, hospitals face CMS penalties if their 30-day readmission rates for patients who are discharged after an MI exceed certain thresholds. These CMS penalties are levied on all hospital CMS payments, so the impact can be significant. Our telehealth Product can be a tool to help hospitals manage these patients after discharge. We will explore models in which hospitals pay for the device and for the initial 30 days of service. In addition, we will explore models for value-based care, in which the use of the telehealth Product reduces overall costs.

We are currently speaking with hospitals in large healthcare systems to educate them about our first two products. These are sophisticated customers, and we plan to use technical presentations, peer reviewed clinical data, and demonstration projects to achieve penetration of this market. We plan to continue to expand our medical advisory board, conduct clinical trials with leading cardiologists to increase the body of evidence, and establish reference sites among these customers.

For the ED Product, the primary customers are acute care facilities. As with the telehealth Product, we plan to publish clinical studies on the effectiveness of the Product. In addition, we plan to develop financial models demonstrating the cost-effectiveness of the approach and establish reference sites who are using the Product. We do not expect to obtain specific reimbursement for the ED Product but intend to demonstrate that the purchase of the software would result in clinical and economic benefits and potentially reduced malpractice legal exposure for ED provider institutions.

We expect our value proposition will be progressively increased as we gradually add additional functionality to our monitoring solutions and drive down the cost of continuous monitoring by increasing scale and automation. We expect our HeartBeam AIMIGo device and AIMI software to gradually incorporate internally developed algorithms with the capabilities of detecting heart conditions that can be exposed via a standard 12-L ECG device. Additionally, as we collect rich longitudinal data sets from our patients, we expect to train AI and ML algorithms that could potentially have predictive capabilities regarding different heart conditions. Over time and with scale we expect our costs to decrease and provide more and better services to our patients by improving our capabilities.

We plan to establish a direct sales network with relationships and experience selling to our target markets.

Clinical Data

HeartBeam has performed three initial clinical studies to assess performance of our technologies.

In the first study (HeartBeam Ischemia Detection Study — HIDES), we simultaneously collected traditional 12-lead ECG and vector X,Y and Z signals on patients whose coronary arteries were occluded during a Percutaneous Coronary Intervention (PCI). Our VECG-based signal interpretation system had significantly (21%) higher accuracy in detecting ischemia.

In a second study (B Score), the HeartBeam diagnostic engine, using ECG, symptoms, and history, matched the diagnostic performance of expert cardiologists in detecting the presence of MIs in patients presenting to an ED with chest pain. This result indicates that the quality of the diagnostic advice produced by our expert system will be extremely valuable to the physician who is assessing the condition of a patient in a telehealth environment.

The third study, ISPEC, which assessed the false positive rate for non-symptomatic patients, is relevant in a telehealth situation. It is important that the system have a low false positive rate when patients are conducting baseline recordings, which are required on at least a monthly basis. The study yielded no false positives.

All three studies are being prepared for peer-reviewed publication.

Intellectual Property

We believe our intellectual property (“IP”) protects our innovations, and our goal is to become a leader in the ambulatory VECG sector. For some aspects of our proprietary technology, we rely on trade secret protection. It is our view that the combination of these two methods of IP protection maximizes our chances for success.

HeartBeam has nine issued U.S. patents (U.S. 10,433,744, U.S. 10,117,592, U.S. 11,071,490, U.S. 11,419,538, U.S. 11,445,963, U.S. 11,529,085, U.S. 10,980,433, U.S. 11,412,972 and U.S. 11,234,658), and six pending U.S applications. Four of the pending applications have been published, the remaining two pending cases are unpublished. Outside of the U.S., HeartBeam has four issued patents in Germany, France, Netherlands, and United Kingdom and seven pending applications in Canada, China, the European Union (“EU”), Japan and Australia. HeartBeam has three pending PCT applications. The issued patents are predicted to expire between April 11, 2036 and April 21, 2042.

Our issued and pending U.S. patent applications cover compact VECG systems for remote detection and/or diagnosis of acute myocardial infarction (“AMI”). Outside of the U.S., the pending EU, Australian (“AU”), Japanese (“JP”) and Chinese (“CN”) patent applications correspond to the pending and issued US cases. The pending PCT applications cover methods and apparatuses for automatic cardiac diagnosis as well as compact systems including retractable electrodes.

Research and Development

The primary objective of our research and development program is to provide innovative, user-friendly, ambulatory VECG solutions with high medical value. To date, we have been highly successful in developing our initial products. The emphasis has been on developing a user-friendly solution that is always with the patient and assists physicians in diagnosing heart attacks in chest pain patients.

Our Research team is largely based in Belgrade, Serbia as well as in California, USA. We have assembled a highly capable Belgrade team currently consisting of seven PhD level contributors who are credited with developing our key inventions and patents. The diverse group includes:

- Two nuclear physicists.
- Two Biomedical Engineers experienced in developed digital health applications.
- Two highly experienced Healthcare IT development professionals.
- Two Electrical Engineers (M.S.E.E) with strong signal processing and ECG analysis algorithm expertise from the medical device industry.
- An Electrical Engineer (M.S.E.E) with exceptional implantable medical device development and power optimization expertise.
- A Software Engineer, (PhD Computer Science), with deep expertise in developing mobile applications for medical devices.

Future research and development efforts will focus on the application of signal processing and artificial intelligence to address a range of cardiac conditions.

During 2022 we also added 3 development engineers led by our recently hired Chief Technology Officer Kenneth Persen. This is an experienced development team that worked together previously and was successful in delivering FDA cleared products.

Future Products

Our core technology — the heart vector approach adopted and invented by our research team — is a platform technology that can provide diagnostic solutions to a variety of cardiovascular patients. Our plans call for expanding solutions that diagnose all major cardiac conditions that are diagnosed by ECGs.

Our future plans include the development of a VECG-based, synthesized 12-lead capable patch ECG monitor that will provide advantages over existing single-lead ECG patch products such as the Zio-XT from iRhythm Technologies, Inc. Our approach will offer a synthesized 12-lead ECG with a patch that is very similar, in dimensions and look and feel, to the currently available single lead ECG patches. We believe providing standard of care 12-lead ECG capabilities will have significant diagnostic advantages over a single lead patch.

We also plan to integrate a synthesized 12-lead ECG smartwatch-based monitor intended for detection of heart attacks and complex cardiac arrhythmias. This invention eliminates the need for a dedicated ECG device while offering a synthesized 12-lead ECG capability enabling heart attack and complex arrhythmia detection.

While our initial telehealth Product is powered by a software expert system that serves as a diagnostic aid to a physician, we will develop an AI based diagnostic system that will supplement our diagnostic expert system.

We are committed to continue advancing the full potential inherent in our synthesized 12-lead 3D VECG technology as demonstrated in recently issued and allowed patents with potentially disruptive market impacts.

Summary of Risk Factors

Our business and our ability to execute our business strategy are subject to a number of risks of which you should be aware of before you decide to buy our Common Stock. In particular, you should carefully consider following risks, which are discussed more fully in “Risk Factors” beginning on page 15 of this prospectus:

- We have a limited operating history upon which investors can evaluate our future prospects.
- We have expressed substantial doubt about our ability to continue as a going concern.
- We have no revenues and we cannot predict when we will achieve first revenues and be sustained.
- We may never complete the development and commercialization of products that we are currently developing and future development of new generations of any of our other proposed products.

- We may not meet our product development and commercialization milestones.
- Our business is dependent upon physicians utilizing and prescribing our solution; if we fail to engage physicians to utilize our solution, our revenues may never materialize or may not meet our projections.
- We are subject to extensive governmental regulations relating to the manufacturing, labeling and marketing of our products.
- If we are not able to both obtain and maintain adequate levels of third-party reimbursement for our products, it would have a material adverse effect on our business.
- Changes in reimbursement practices of third-party payers could affect the demand for our products and services and our revenue levels.
- We may experience difficulty in obtaining reimbursement for our services from commercial payors that consider our technology to be experimental and investigational, which would adversely affect our revenue and operating results.
- Reimbursement by Medicare is highly regulated and subject to change; our failure to comply with applicable regulations, could decrease our expected revenue and may subject us to penalties or have an adverse impact on our business.
- Consolidation of commercial payors could result in payors eliminating coverage of mobile cardiac monitoring solutions or reducing reimbursement rates.
- Product defects could adversely affect the results of our operations.
- Interruptions or delays in telecommunications systems or in the data services provided to us by cellular communication providers or the loss of our wireless or data services could impair the delivery of our cardiac monitoring services.
- Interruptions in computing and data management cloud systems could impair the delivery of our cardiac monitoring services.
- We could be exposed to significant liability claims if we are unable to obtain insurance at acceptable costs and adequate levels or otherwise protect ourselves against potential product liability claims.
- We require additional capital to support our present business plan and our anticipated business growth, and such capital may not be available on acceptable terms, or at all, which would adversely affect our ability to operate.
- We cannot predict our future capital needs and we may not be able to secure additional financing.
- The results of our research and development efforts are uncertain and there can be no assurance of the commercial success of our products.
- If we fail to retain certain of our key personnel and attract and retain additional qualified personnel, we might not be able to pursue our growth strategy.
- We will not be profitable unless we can demonstrate that our products can be manufactured at low prices.
- Our dependence on a limited number of suppliers may prevent us from delivering our devices on a timely basis.
- Natural disasters and other events beyond our control could materially adversely affect us.
- COVID-19 pandemic may negatively affect our operations.
- The industry in which we operate is highly competitive and subject to rapid technological change. If our competitors are better able to develop and market products that are safer, more effective, less costly, easier to use, or are otherwise more attractive, we may be unable to compete effectively with other companies.
- We face competition from other medical device companies that focus on similar markets.

- Unsuccessful clinical trials or procedures relating to products under development could have a material adverse effect on our prospects.
- Intellectual property litigation and infringement claims could cause us to incur significant expenses or prevent us from selling certain of our products.
- If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.
- If we are unable to protect our proprietary rights, or if we infringe on the proprietary rights of others, our competitiveness and business prospects may be materially damaged.
- Dependence on our proprietary rights and failing to protect such rights or to be successful in litigation related to such rights may result in our payment of significant monetary damages or impact offerings in our product portfolios.
- Enforcement of federal and state laws regarding privacy and security of patient information may adversely affect our business, financial condition or operations.
- We may become subject, directly or indirectly, to federal and state health care fraud and abuse laws and regulations and if we are unable to fully comply with such laws, the Company could face substantial penalties.
- We may be subject to federal and state false claims laws which impose substantial penalties.
- The price of our Common Stock may be subject to wide fluctuations.
- The offering price of our Common Stock may not be indicative of the value of our assets or the price at which shares can be resold. The offering price of our Common Stock may not be an indication of our actual value.
- If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.
- We may, in the future, issue additional shares of Common Stock, which would reduce investors' percent of ownership and dilute our share value
- Our need for future financing may result in the issuance of additional securities which will cause investors to experience dilution.
- If our shares become subject to the penny stock rules, it would become more difficult to trade our shares.
- Liability of directors for breach of duty is limited under Delaware law.
- We do not anticipate paying any cash dividends on our Common Stock in the foreseeable future and, as such, capital appreciation, if any, of our Common Stock will be your sole source of gain for the foreseeable future.
- We are an "emerging growth company," and any decision on our part to comply with certain reduced disclosure requirements applicable to emerging growth companies could make our Common Stock less attractive to investors.
- As a result of our becoming a public company, we will become subject to additional reporting and corporate governance requirements that will require additional management time, resources and expense.
- We have identified weaknesses in our internal controls, and we cannot provide assurances that these weaknesses will be effectively remediated or that additional material weaknesses will not occur in the future.
- Future sales of a substantial number of our Common Stock by our existing shareholders could cause our stock price to decline.
- Future sales and issuances of our Common Stock or rights to purchase Common Stock, including pursuant to our equity incentive plans and outstanding warrants could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

- The Company will have broad discretion in the use of the net proceeds from this offering and may fail to apply these proceeds effectively.
- There is no assurance that an active and liquid trading market in our Common Stock will develop.
- While our Common Stock is listed on the NASDAQ, the exchange may subsequently delist our Common Stock if we fail to comply with ongoing listing standards.
- You will experience immediate and substantial dilution as a result of this offering and may experience additional dilution in the future.
- This is a commercially reasonable “best efforts offering. We may sell fewer than all the securities offered hereby which may not be enough to properly fund the current financial requirements of the Company.

THE OFFERING

Securities offered by us	Up to 16,666,666 shares of Common Stock at \$1.50 per share on a commercially reasonable best efforts basis.
Shares of Common Stock outstanding before this offering ⁽¹⁾	8,009,743 shares.
Shares of Common Stock to be outstanding after this offering ⁽¹⁾	24,676,409 shares.
Use of Proceeds	<p>We estimate that the net proceeds from this offering will be approximately \$23.2 million, if the full amount of the offering is sold, after deducting the placement agent fees and estimated offering expenses payable by us.</p> <p>We intend to use the net proceeds from this offering general working capital and other corporate purposes. See “Use of Proceeds” for a more complete description of the intended use of proceeds from this offering.</p>
Placement Agent’s Warrant	The registration statement of which this prospectus is a part also registers warrants (the “Placement Agent’s Warrants”) to purchase up to shares of Common Stock (10% of the number of Common Stock sold in this offering) to be issued to the placement agent or its designees, as a portion of its compensation payable in connection with this offering, including Public Ventures’ and its affiliates’ purchase amount in this offering, as well as the Common Stock issuable upon the exercise of the Placement Agent’s Warrants. Please see “Plan of Distribution — Placement Agent’s Warrants” for a description of these warrants.
Dividend Policy	We have never declared any cash dividends on its Common Stock. We currently intend to use all available funds and any future earnings for use in financing the growth of its business and does not anticipate paying any cash dividends for the foreseeable future.
Risk Factors	You should carefully consider the information set forth in this prospectus and, in particular, the specific factors set forth in the “Risk Factors” section beginning on page 15 of this prospectus before deciding whether or not to invest in our Common Stock.

(1) The number of shares of Common Stock outstanding is based on shares of Common Stock issued and outstanding as of December 31, 2022 and excludes the following:

- 2,196,798 shares of Common Stock issuable upon the exercise of outstanding stock options having a weighted average exercise price of \$1.76 per share;
- 253,970 shares of Common Stock issuable upon vesting of RSUs;
- 3,908,276 shares of Common Stock issuable upon the exercise of outstanding warrants having a weighted average exercise price of \$5.42 per share;
- 747,364 shares of Common Stock reserved for future issuance under the Company’s 2022 Equity Incentive Plan (the “2022 Equity Plan”);

Except as otherwise indicated herein, all information in this prospectus reflects or assumes:

- no exercise of the outstanding options described above;
- excludes shares of Common Stock underlying the Placement Agent Warrants to be issued to the placement agent in connection with this offering.

Lock-up	<p>Our officers and directors have agreed to be subject to a lock-up period of 180 days following the closing of this offering. This means that, during the applicable lock-up period, those persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock. Certain limited transfers are permitted during the lock-up period if the transferee agrees to these lock-up restrictions, including the right to sell any shares of common stock received on the exercise of a restricted stock unit. The Company is subject to a one year lock-up on its being able to sell shares of common stock or securities convertible into common stock without the permission of the placement agent and filing any registration statement relating to the offering of shares of capital stock. It is also restricted for the same one year period in its use of the current at-the-market offering arrangement it has with A.G.P./Alliance Global Partners, subject to approval of any puts by the placement agent and certain minimum market standards. The Company is permitted to issue stock under certain other transactions and stock options or stock awards to directors, officers and employees under our existing plans. Public Ventures may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements.</p>
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RISK FACTORS

An investment in our securities involves substantial risks. In addition to other information in this prospectus, you should carefully consider the following risks and the risks described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 under the caption “Item 1A. Risk Factors,” as well as other information and data set forth in this prospectus and the documents incorporated by reference herein, before making an investment decision with respect to our securities. The occurrence of any of the following risks could materially and adversely affect our business, prospects, financial condition, and our results of operations, which could cause you to lose all or a part of your investment in our securities. Some statements in this prospectus, including statements in the following risk factors, constitute forward-looking statements. See “Forward-Looking Statements.”

Risks Related To Our Common Stock

The price of our Common Stock may be subject to wide fluctuations.

A consistently active trading market for our Common Stock does not exist and may not develop or be maintained. You may not be able to sell your shares quickly or at the current market price if trading in our stock is not active. You may lose all or a part of your investment. The market price of our Common Stock may be highly volatile and subject to wide fluctuations in response to a variety of factors and risks, many of which are beyond our control. In addition to the risks noted elsewhere in this prospectus, some of the other factors affecting our stock price may include:

- variations in our operating results;
- announcements by us or our competitors of significant contracts, acquisitions, strategic partnerships, joint ventures or capital commitments;
- announcements by third parties of significant claims or proceedings against us;
- future sales of our Common Stock;
- any delay in our regulatory filings for our product and any adverse development or perceived adverse development with respect to the applicable regulatory authority’s review of such filings, including without limitation the FDA’s issuance of a “refusal to file” letter or a request for additional information;
- adverse results or delays in clinical trials;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval of our product;
- changes in laws or regulations applicable to our products, including but not limited to clinical trial requirements for approvals;
- adverse developments concerning our manufacturers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- our inability to establish collaborations if needed;
- additions or departures of key scientific or management personnel;
- introduction of new products or services offered by us or our competitors;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our ability to effectively manage our growth;
- the size and growth of our initial target markets;

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- our ability to successfully treat additional types of indications or at different stages;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our Common Stock by us or our stockholders in the future;
- trading volume of our Common Stock;
- changes in accounting practices;
- ineffectiveness of our internal controls;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our or our licensee's technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

The offering price of our Common Stock may not be indicative of the value of our assets or the price at which shares can be resold. The offering price of the Shares may not be an indication of our actual value.

The offering price of per share of our Common Stock was determined based upon negotiations between the Company and the placement agent. Factors taken into consideration include the trading volume of our Common Stock prior to this offering, the historical prices at which our shares of Common Stock have recently traded, 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. No assurance can be given that the securities underlying our Common Stock can be resold at the public offering price.

For these reasons, comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on past results as an indication of future performance. In the past, following periods of volatility in the market price of a public company's securities, securities class action litigation has often been instituted against the public company. Regardless of its outcome, this type of litigation could result in substantial costs to us and a likely diversion of our management's attention. You may not receive a positive return on your investment when you sell your shares and you may lose the entire amount of your investment.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our Common Stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of our Company or fails to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

We may, in the future, issue additional shares of Common Stock, Warrants or Preferred Stock, which would reduce investors' percent of ownership and dilute our share value

Our Certificate of Incorporation authorizes the issuance of 100,000,000 shares of Common Stock and 10,000,000 shares of Preferred Stock. As of December 31, 2022, there are outstanding 8,009,743 shares of Common Stock and zero shares of Preferred Stock.

Our need for future financing may result in the issuance of additional securities which will cause investors to experience dilution.

Our cash requirements may vary from those now planned which depend upon numerous factors, including the result of future research and development activities, our ability to estimate future expenses and acceptance of our products in the market.

There are no significant commitments for future financing of the commercial phase of our telehealth Product and other future products. In the future, our securities may be offered to other investors at a price lower than the price per share paid by our investors, or upon terms which may be deemed more favorable than previously offered. In addition, the issuance of securities in any future financing using our securities may dilute an investor's equity ownership. Moreover, we may issue other equity securities with derivative features to procure qualified personnel or for other business reasons. The issuance of any such derivative securities, which is at the discretion of our board of directors, may further dilute the equity ownership of our stockholders, including the investors in this offering. No assurance can be given as to our ability to procure additional financing, if required, and on terms deemed favorable to us. To the extent additional capital is required and cannot be raised successfully, we may then have to limit our then current operations and/or may have to curtail certain, if not all, of our business objectives and plans.

If our shares become subject to the penny stock rules, it would become more difficult to trade our shares.

The SEC has adopted regulations, which generally define "penny stock" to be an equity security that has a market price of less than \$5.00 per share, subject to specific exemptions. The market price of our Common Stock is less than \$5.00 per share and therefore may be a "penny stock." Brokers and dealers effecting transactions in "penny stock" must disclose certain information concerning the transaction, obtain a written agreement from the purchaser and determine that the purchaser is reasonably suitable to purchase the securities. These rules may restrict the ability of brokers or dealers to sell our Common Stock and may affect your ability to sell shares of our Common Stock in the future.

Liability of directors for breach of duty is limited under Delaware law.

Our certificate of incorporation limits the liability of directors to the maximum extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability for any:

- breach of their duty of loyalty to us or our stockholders;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases, or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- transaction from which the directors derived an improper personal benefit.

These limitations of liability do not apply to liabilities arising under the federal or state securities laws and do not affect the availability of equitable remedies such as injunctive relief or rescission.

Our bylaws provide that we will indemnify for our directors and officers to the fullest extent permitted by law and may indemnify employees and other agents. Our bylaws also provide that we are obligated to advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding.

We entered into separate indemnification agreements with our directors and officers. These agreements, among other things, require us to indemnify our directors and officers for any and all expenses (including reasonable attorneys' fees, retainers, court costs, transcript costs, fees of experts, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees) judgments, fines and amounts paid in settlement

actually and reasonably incurred by such directors or officers or on his or her behalf in connection with any action or proceeding arising out of their services as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request provided that such person follows the procedures for determining entitlement to indemnification and advancement of expenses set forth in the indemnification agreement. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might provide a benefit to us and our stockholders. Our results of operations and financial condition may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

In so far as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

At present, there is no pending litigation or proceeding involving any of our directors or officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

We do not anticipate paying any cash dividends on our Common Stock in the foreseeable future and, as such, capital appreciation, if any, of our Common Stock will be your sole source of gain for the foreseeable future.

We do not anticipate paying any cash dividends on our Common Stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. In addition, and any future loan arrangements we enter into may contain, terms prohibiting or limiting the amount of dividends that may be declared or paid on our Common Stock. As a result, capital appreciation, if any, of our Common Stock will be your sole source of gain for the foreseeable future.

Risks Related to this Offering

We are an “emerging growth company,” and any decision on our part to comply with certain reduced disclosure requirements applicable to emerging growth companies could make our Common Stock less attractive to investors.

We are an “emerging growth company” as defined in the JOBS Act, and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, not being required to comply with any new requirements adopted by the Public Company Accounting Oversight Board (the “PCAOB”), requiring mandatory audit firm rotation or a supplement to the auditor’s report in which the auditor would be required to provide additional information about the audit and the financial statements of the issuer, not being required to comply with any new audit rules adopted by the PCAOB after April 5, 2012 unless the SEC determines otherwise, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could remain an emerging growth company until the earlier of: (i) the last day of the fiscal year in which we have total annual gross revenues of \$1.235 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of our first sale of common equity securities pursuant to an effective registration statement; (iii) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer. We cannot predict if investors will find our Common Stock less attractive if we choose to rely on these exemptions. If some investors find our Common Stock less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our Common Stock and our stock price may be more volatile. Further, as a result of these scaled regulatory requirements, our disclosure may be more limited than that of other public companies and you may not have the same protections afforded to shareholders of such companies.

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Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended (the “Securities Act”), for complying with new or revised accounting standards. We have opted for taking advantage of the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the Jobs Act.

We have identified weaknesses in our internal controls, and we cannot provide assurances that these weaknesses will be effectively remediated or that additional material weaknesses will not occur in the future.

As a public company, we are subject to the reporting requirements of the Exchange Act, and the Sarbanes-Oxley Act. We expect that the requirements of these rules and regulations will continue to increase our legal, accounting and financial compliance costs, make some activities more difficult, time consuming and costly, and place significant strain on our personnel, systems and resources.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures, and internal controls over financial reporting.

We do not yet have effective disclosure controls and procedures, or internal controls over all aspects of our financial reporting. We are continuing to develop and refine our internal controls over financial reporting. Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. We will be required to expend time and resources to further improve our internal controls over financial reporting, including by expanding our staff. However, we cannot assure you that our internal control over financial reporting, as modified, will enable us to identify or avoid material weaknesses in the future.

We have identified material weaknesses in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis. The material weaknesses identified to date include (i) lack of formal risk assessment under COSO framework (ii) policies and procedures which are not adequately documented, (iii) lack of proper approval processes, review processes and documentation for such reviews, (iv) insufficient GAAP experience regarding complex transactions and ineffective review processes over period end financial disclosure and reporting and (v) insufficient segregation of duties.

We will be required to expend time and resources to further improve our internal controls over financial reporting. However, we cannot assure you that our internal control over financial reporting, as modified, will enable us to identify or avoid material weaknesses in the future.

Our current controls and any new controls that we develop may become inadequate because of changes in conditions in our business. Further, weaknesses in our disclosure controls or our internal control over financial reporting may be discovered in the future. Any failure to develop or maintain effective controls, or any difficulties encountered in their implementation or improvement, could harm our operating results or cause us to fail to meet our reporting obligations and may result in a restatement of our financial statements for prior periods. Any failure to implement and maintain effective internal control over financial reporting could also adversely affect the results of management reports and independent registered public accounting firm audits of our internal control over financial reporting that we will eventually be required to include in our periodic reports that will be filed with the SEC. Ineffective disclosure controls and procedures, and internal control over financial reporting could also cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the market price of our common stock.

Our independent registered public accounting firm is not required to audit the effectiveness of our internal control over financial reporting until after we are no longer an “emerging growth company” as defined in the JOBS Act and meet other requirements. At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our internal control over financial reporting is documented, designed or operating. Any failure to maintain effective disclosure controls and internal control over financial reporting could have a material and adverse effect on our business and operating results, and cause a decline in the market price of our common stock.

Future sales of a substantial number of our Common Stock by our existing shareholders could cause our stock price to decline.

Prior to the consummation of this offering, as of December 31, 2022 we have 8,009,743 shares of our Common Stock outstanding. Upon consummation of this offering, we have agreed to issue up to 16,666,666 shares of our Common Stock, assuming the full amount of the shares being offered are sold. We have also filed a registration statement for \$13 million under an ATM as a stand-alone. All of the shares sold in this offering will be eligible for sale in the public markets upon closing. It is conceivable that many shareholders may wish to sell some or all of their shares. If our shareholders sell substantial amounts of our Common Stock in the public market at the same time, the market price of our Common Stock could decrease significantly due to an imbalance in the supply and demand of our Common Stock. Even if they do not actually sell the Common Stock, the perception in the public market that our shareholders might sell significant Common Stock could also depress the market price of our Common Stock.

Future sales and issuances of our Common Stock or rights to purchase Common Stock, including pursuant to our equity incentive plans and outstanding warrants could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell Common Stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell Common Stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our Common Stock, including shares of Common Stock sold in this offering. Initially, the aggregate number of shares of our Common Stock that may be issued pursuant to stock awards under our 2022 Equity Plan is 1,900,000 shares, and as of December 31, 2022, 747,364 were available for issuance. Increases in the number of shares available for future grant or purchase may result in additional dilution, which could cause our stock price to decline.

The Company will have broad discretion in the use of the net proceeds from this offering and may fail to apply these proceeds effectively.

The Company's management will have broad discretion in the application of the net proceeds of this offering, including using the proceeds to conduct operations, expand the Company's business lines and for general working capital. The Company may also use the net proceeds of this offering to acquire or invest in complementary businesses, products, or technologies, or to obtain the right to use such complementary technologies. We have no commitments with respect to any acquisition or investment; however, we seek opportunities and transactions that management believes will be advantageous to the Company and its operations or prospects. We cannot specify with certainty the actual uses of the net proceeds of this offering. You may not agree with the manner in which our management chooses to allocate and spend the net proceeds. We may invest the net proceeds from this offering in a manner that does not produce income or that loses value. The failure by our management to apply these funds effectively could harm our business, financial condition and results of operations.

Although our Common Stock is listed on the Nasdaq Capital Market, the exchange may subsequently delist our Common Stock if we fail to comply with ongoing listing standards.

Although our Common Stock is listed on the Nasdaq Capital Market, the exchange will require us to meet certain financial, public float, bid price and liquidity standards on an ongoing basis in order to continue the listing of our Common Stock. If we fail to meet these continued listing requirements, our Common Stock may be subject to delisting. If our Common Stock are delisted and we are not able to list such Common Stock on another national securities exchange, we expect our securities would be quoted on an over-the-counter market; however, if this were to occur, our stockholders could face significant material adverse consequences, including limited availability of market quotations for our Common Stock and reduced liquidity for the trading of our securities. In addition, in the event of such delisting, we could experience a decreased ability to issue additional securities and obtain additional financing in the future. Even though our Common Stock are listed on the Nasdaq Capital Market, there can be no assurance that an active trading market for our Common Stock will develop or be sustained after our initial listing.

Our failure to maintain compliance with Nasdaq's continued listing requirements could result in the delisting of our common stock and/or our warrants.

On March 20, 2023, we received a letter from The Nasdaq Stock Market LLC ("Nasdaq") indicating that we are not in compliance with Nasdaq Listing Rule 5550(b)(1), which requires companies listed on The Nasdaq Stock Market to maintain a minimum of \$2,500,000 in stockholders' equity for continued listing. In our annual report on Form 10-K for the period ended December 31, 2022, we reported stockholders' equity of approximately \$2,374,000, which does not currently satisfy Listing Rule 5550(b)(1).

Nasdaq's letter has no immediate impact on the listing of our common stock or warrants, which will continue to be listed and traded on Nasdaq, subject to our compliance with the other continued listing requirements. Nasdaq's letter provides us with 45 calendar days, or until May 4, 2023, to submit a plan to regain compliance. If the plan is accepted, we can be granted up to 180 calendar days from March 20, 2023 (or September 18, 2023), to evidence compliance.

We intend to regain compliance with the applicable continued listing requirements of Nasdaq prior to the end of the compliance period set forth in the letter. However, until Nasdaq has reached a final determination that the Company has regained compliance with all of the applicable continued listing requirements, there can be no assurances regarding the continued listing of our common stock or warrants on Nasdaq. The delisting of our common stock and warrants from Nasdaq would have a material adverse effect on our access to capital markets, and any limitation on market liquidity or reduction in the price of its common stock as a result of that delisting would adversely affect our ability to raise capital on terms acceptable to the Company, if at all.

This letter from Nasdaq does not affect our business, operations or reporting requirements with the Securities and Exchange Commission.

You will experience immediate and substantial dilution as a result of this offering and may experience additional dilution in the future.

If you purchase shares of Common Stock in this offering, the value of your shares based on our actual book value will immediately be less than the price you paid. This reduction in the value of your equity is known as dilution. This dilution occurs in large part because our existing stockholders paid less than the assumed public offering price when they acquired their shares of Common Stock. Based upon the issuance and sale of 16,666,666 shares of Common Stock by us in this offering at a public offering price of \$1.50 per share, you will incur immediate dilution of in the net tangible book value per share of Common Stock. If outstanding options to purchase our Common Stock are exercised, investors will experience additional dilution. For more information, see "Dilution."

This is a commercially reasonable "best efforts offering. We may sell fewer than all the securities offered hereby which may not be enough to properly fund the current financial requirements of the Company.

The placement agent has agreed to use its commercial 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. There is no required minimum number of securities that must be sold as a condition to completion of this offering. As there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth above. Investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to pursue the business goals outlined in this prospectus. Also, any proceeds from the sale of securities offered by us will be available for our immediate use, despite uncertainty about whether we would be able to use such funds to effectively implement our business plan.

Subscriptions by investors are irrevocable during the offering period.

Investors will make their subscriptions during the offering period that will end on May 18, 2023, unless extended to a date not later than May 25, 2023. Once the subscription agreement for the purchase of the securities offered hereby is submitted to the placement agent and the purchase price is paid to the escrow agent, the subscription is irrevocable. Subscription funds will only be returned to the investor if the offering is terminated prior to the closing by the Company in its sole discretion. The return of subscription funds, if that occurs, will be without interest or deduction, made by the escrow agent.

USE OF PROCEEDS

Assuming the sale of all of the shares in this offering, we estimate that the net proceeds from the sale of shares will be approximately \$23.2 million. “Net proceeds” is what we expect to receive after deducting the placement agent fees and estimated offering expenses payable by us. However, because this is a best efforts offering with no minimum number of securities or amount of proceeds as a condition to closing, the actual offering amount, the 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, and we may not sell all or any of the securities we are offering. As a result, we may receive significantly less in net proceeds.

We intend to use the net proceeds from this offering to conduct operations, increase marketing efforts, and investments in our existing business initiatives and products, as well as general working capital. We anticipate budgeting approximately \$23.2 million, of the proceeds from the offering for conducting operations and for working capital.

We may also use a portion of the net proceeds of this offering to acquire or invest in complementary businesses, products, or technologies, or to obtain the right to use such complementary technologies. We have no commitments with respect to any acquisition or investment and is not currently involved in any negotiations with respect to any such transactions.

We currently intend to use the net proceeds from this offering as follows:

- We anticipate budgeting approximately \$10 million to fund engineering and regulatory work for HeartBeam AIMI and HeartBeam AIMIGo, to achieve FDA 510(k) submission of versions 1 and 2 of our telehealth product and to ready the product for limited market releases during 2023; and
- the balance for working capital and general corporate purposes.

This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions.

As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering. The amounts and timing of its actual expenditures will depend on numerous factors, including the status of its product development efforts, sales and marketing activities, technological advances, amount of cash generated or used by its operations and competition. Accordingly, our management will have broad discretion in the application of the net proceeds and investors will be relying on the judgment of its management regarding the application of the proceeds of this offering.

We believe we will need to raise additional funding of approximately \$30 million for commercialization of HeartBeam AIMIGo and ongoing development and commercialization of additional products utilizing our 3D VECG technology platform before becoming cash flow positive.

DILUTION

If you invest in our Common Stock in this offering, your ownership interest will be diluted to the extent of the difference between the assumed offering price per share of its Common Stock and the as adjusted net tangible book value per share of its Common Stock immediately after the offering. Historical net tangible book value per share represents the amount of the Company's total tangible assets less total liabilities, divided by the number of shares of its Common Stock outstanding.

The historical net tangible book value (deficit) of our Common Stock as of December 31, 2022, was approximately \$2.4 million or \$0.30 per share based upon shares of Common Stock outstanding on such date. Historical net tangible book value (deficit) per share represents the amount of its total tangible assets reduced by the amount of its total liabilities, divided by the total number of shares of Common Stock outstanding.

After giving effect to the sale of all of the 16,666,666 of shares of Common Stock offered in this offering at an assumed public offering price of \$1.50 per share after deducting estimated placement agent fees and our estimated offering expenses net tangible book value as of December 31, 2022 would have been \$25,536,499 or \$1.03 per share. This represents an immediate increase in net tangible book value of \$0.73 per share, to the existing stockholders, and an immediate dilution in net tangible book value of \$0.47 per share to new investors.

The following table illustrates this per share dilution of shares of Common Stock sold in this offering:

Assumed public offering price per share	\$	1.50
Historical net tangible book value per share as of December 31, 2022	\$	0.30
Increase in net tangible book value per share attributable to this offering	\$	0.73
As adjusted net tangible book value per share after giving effect to this offering	\$	1.03
Dilution per share to new investors in this offering	\$	0.47

The information discussed above is illustrative only, and the dilution information following this offering will be adjusted based on the actual public offering price and other terms of this offering determined at pricing. A \$1.00 increase in the assumed public offering price of \$1.50 per share would increase the net tangible book value by \$0.64 per share and increase the dilution to new investors by \$0.36 per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated placement agent fees and estimated expenses payable by us. Similarly, a \$1.00 decrease in the assumed public offering price of \$1.50 per share would decrease the net tangible book value by \$0.63 per share and decrease the dilution to new investors by \$0.37 per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated placement agent fees and estimated expenses payable by us. We may also increase or decrease the number of shares in the offering. An increase of 100,000 shares offered by us would increase the net tangible book value by \$0.01 per share and decrease the dilution to new investors by \$0.01 per share, assuming the assumed public offering price of \$1.50 per share remains the same and after deducting the estimated placement agent fees and estimated expenses payable by us. Similarly, a decrease of 100,000 shares offered by us would decrease the net tangible book value by \$0.00 per share and increase the dilution to new investors by \$0.00 per share, assuming the assumed public offering price of \$1.50 per share remains the same and after deducting the estimated placement agent fees and estimated expenses payable by us.

The number of shares of Common Stock outstanding is based on 8,009,743 shares of Common Stock issued and outstanding as of December 31, 2022, and excludes the following:

- 2,196,798 shares of Common Stock issuable upon the exercise of outstanding stock options having a weighted average exercise price of \$1.76 per share;
- 253,970 shares of Common Stock issuable upon vesting of RSUs;
- 3,908,276 shares of Common Stock issuable upon the exercise of outstanding warrants having a weighted average exercise price of \$5.42 per share;
- 747,364 shares of Common Stock reserved for future issuance under the Company's 2022 Equity Plan

Except as otherwise indicated herein, all information in this prospectus assumes:

- no exercise of the outstanding options or warrants described above; and
- any Placement Agent Warrants issued to the placement agent as fees.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding our Common Stock, beneficially owned as of March 31, 2023 (i) each person known to the Company to beneficially own more than 5% of its Common Stock, (ii) each executive officer, director and director nominee and (iii) all officers, directors and director nominees as a group. The following table is based on the Company having 8,227,074 shares of Common Stock issued and outstanding as of March 31, 2023. The Company calculated beneficial ownership according to Rule 13d3 of the Securities Exchange Act of 1934, as amended as of that date. Shares of the Company's Common Stock issuable upon exercise of options or warrants or conversion of notes that are exercisable or convertible within 60 days after March 31, 2023 are included as beneficially owned by the holder, but not deemed outstanding for computing the percentage of any other stockholder for Percentage of Common Stock Beneficially Owned. For each individual and group included in the table below, percentage ownership is calculated by dividing the number of shares beneficially owned by such person or group by the sum of the 8,227,074 shares of Common Stock outstanding at March 31, 2023, plus the number of shares of Common Stock that such person or group had the right to acquire on or within 60 days after March 31, 2023. Beneficial ownership generally includes voting and dispositive power with respect to securities. Unless otherwise indicated below, the persons and entities named in the table have sole voting and sole dispositive power with respect to all shares beneficially owned.

Name	Shares Beneficially Owned	%
Richard Ferrari ⁽¹⁾	180,294	2.16%
Branislav Vajdic, PhD ⁽²⁾	1,066,057	12.72%
George A. de Urioste ⁽³⁾	19,255	*
Marga Ortigas-Wedekind ⁽⁴⁾	57,737	*
Willem Pieter Elfrink ⁽⁵⁾	394,330	4.75%
Richard Brounstein ⁽⁶⁾	153,774	1.86%
Robert Eno ⁽⁷⁾	35,202	*
Kenneth Persen ⁽⁸⁾	—	—%
<i>All directors and executive officers as a group (8 persons)</i>	1,906,649	21.88%
Bosko Bojovic ⁽⁹⁾ Alekse Nenadovica, 18 11000 Belgrade Serbia	517,272	6.29%

* Less than 1 percent ownership

- (1) Includes (i) 65,653 shares acquired from the conversion of 2015 Convertible Notes and (ii) 114,641 options exercisable within 60 days after March 31, 2023. Does not include 94,449 unvested stock options and 73,529 unvested RSUs.
- (2) Includes (i) 794,545 shares acquired as founders equity, (ii) 115,559 shares acquired from the conversion of 2015 Convertible Notes, (iii) 1,287 shares acquired from the exercise warrants, (iv) 119,666 options exercisable within 60 days after March 31, 2023, and (v) 35,000 BEATW exercisable warrants. Does not include 239,334 unvested stock options.
- (3) Includes 19,255 options exercisable within 60 days after March 31, 2023. Does not include 24,745 unvested stock options and 55,147 unvested RSUs.
- (4) Includes (i) 9,000 units of shares and warrants purchased November 11, 2021, (ii) 9,000 BEATW exercisable warrants, (iii) 7,824 shares acquired from the conversion of 2015 Convertible Notes, and (iii) 31,913 options exercisable within 60 days after March 31, 2023. Does not include 11,722 unvested stock options and 55,147 unvested RSUs.
- (5) Includes (i) 101,818 shares acquired under the 2015 Incentive Plan (ii) 207,056 shares acquired from the conversion of 2015 Convertible Notes, (iii) 3,640 shares acquired from the exercise warrants, (iv) 21,816 options exercisable within 60 days after March 31, 2023 and (v) 60,000 BEATW exercisable warrants. Does not include (a) 21,820 unvested stock options and (b) 55,147 unvested RSUs.
- (6) Includes (i) 72,725 shares acquired under the 2015 Incentive Plan, (ii) 5,000 shares and 5,000 BEATW warrants purchased November 11, 2021, (iii) 5,000 shares and 10,000 BEATW warrants acquired on the open market, (iv) 29,197 shares acquired from the conversion of 2015 Convertible Notes, (v) 26,668 options exercisable within 60 days after March 31, 2023, and (vi) 184 shares acquired from the exercise warrants. Does not include 53,332 unvested stock options.
- (7) Includes 35,202 options exercisable within 60 days after March 31, 2023. Does not include 250,161 unvested stock options.
- (8) Does not include 140,000 unvested stock options.
- (9) Represents 517,272 shares acquired as founders' equity.

PLAN OF DISTRIBUTION

We engaged Public Ventures, LLC (the “placement agent” or “Public Ventures”) to act as our exclusive placement agent to solicit offers to purchase the securities offered by this prospectus on a commercially reasonable best efforts basis. The placement agent may engage sub-placement agents to assist in the placement of the securities offered hereby. The placement agent is not obligated to purchase or sell any of the securities offered by this prospectus, but it has agreed to use its commercially reasonable “best efforts” to find eligible purchasers for the securities offered hereby. The placement agent and its affiliates and affiliates of the company may participate in the offering. There is no minimum offering amount required as a condition to the closing of this offering.

The offering price and other terms of this offering will be subject to market conditions and negotiations between the company and the placement agent. The placement agent will have no authority to bind the company to any sale of the securities offered by this prospectus. Investors will enter into a securities purchase agreement in the form attached as an exhibit to the Registration Statement of which this prospectus is a part, and they shall rely on this prospectus in connection with the purchase of our securities in this offering.

As a commercially reasonable “best efforts” offering, there can be no assurance that the offering contemplated hereby will ultimately be consummated or that the full amount of the securities offered will be sold. We also have the right to terminate the offering at any time in our discretion prior to the closing of the offering. In the event of a termination of the offering, investor funds will be promptly returned by the escrow agent to investors without interest or offset accordance with rules 10b-9 and 15c2-4 promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

This offering will terminate on May 18, 2023 unless we decide to terminate the offering prior to that date. Prior to the termination date, we may extend the offering to May 25, 2023. We will have one closing for all the securities purchased in this offering. The public offering price per share will be fixed for the duration of this offering.

Fees and Expenses

We have agreed to pay Public Ventures a total cash fee equal to 6.35% of the aggregate gross proceeds of this offering. Public Ventures and/or its affiliates will purchase securities in the offering, on the exact same terms as all the other investors in the offering, up to an amount equal to the cash fee the company will owe under the selling agent agreement, which will be calculated on the gross proceeds of the offering including the Public Ventures and affiliated persons’ purchase amount in the offering. The gross proceeds on which the cash fee is paid will include any amount that Public Ventures and its affiliates invest, and so as to fulfil this intention, the purchase by other investors may be reduced or rejected at the direction of Public Ventures with the agreement of the company. Public Ventures will be responsible for all its expenses in connection with this offering, including its legal fees. The company is responsible for all its costs and expenses associated with this offering, except those that FINRA regulation requires to be borne by a selling agent, placement agent or underwriter. Excluding the placement agent fees, we estimate the total offering expenses of this offering that will be payable by us will be approximately \$250,000.

The following table summarizes the per share and total cash placement agent’s fees that the Company will pay to the placement agent in connection with the sale of the securities offered pursuant to this prospectus assuming a public offering price of \$1.50 per share of common stock:

Placement Agent Cash Fee per share of Common Stock	\$	0.09525
Total Cash Fees to be Paid to Placement Agent	\$	1,587,500

Placement Agent Warrants

In addition, we have agreed to issue to Public Ventures or its designees warrants to purchase up to 10% of the shares of Common Stock sold in the offering, with an exercise price of \$1.875 per share (representing 125% of the public offering price per share) and exercisable for five years from the date of the commencement of sales in this offering (the “Placement Agent Warrants”). The Placement Agent Warrants will be issued on the gross proceeds of the offering including Public Ventures’ and its affiliates’ purchase amount in the offering and will contain cashless exercise provisions, representations and warranties normal and customary for warrants issued to placement agents, registration rights, including one demand registration right during a period four years beginning three hundred sixty-five days after the effective date of the Registration Statement and unlimited piggyback registration rights for a period of seven

years after the effective date of the Registration Statement of which this prospectus is a part, and will not be callable or terminable prior to the expiration date. Except as permitted by the applicable rules of FINRA, the Placement Agent Warrants and the underlying shares of common stock 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 holder of the Placement Agent Warrants prior to the date that is one hundred eighty (180) days immediately following the effective date of the Registration Statement of which this Prospectus is a part, pursuant to FINRA Rule 5110(e)(1), except as permitted under FINRA Rule 5110(e)(2).

Determination of Offering Price

The public offering price per share of common stock we are offering was negotiated between us and the placement agent based on the valuation of the company. Factors taken into consideration include the trading volume of our common stock prior to this offering, the historical prices at which our shares of common stock have recently traded, 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.

Subscriptions & Escrow

The securities are being offered will be sold in a single closing. Prior to the closing of this offering, (i) each participating investor in this offering will execute and deliver a Subscription Agreement (each, a “Subscription Agreement”) to the placement agent, that the placement agent will make available to the Company and Delaware Trust Company, as Escrow Agent (the “Escrow Agent”); (ii) each participating investor will transfer to a non-interest bearing deposit account maintained by the Escrow Agent (the “Escrow Account”) funds in an amount equal to the price per share as shown on the cover page of this prospectus multiplied by the number of shares subscribed by the participating investor; (iii) subscription funds received from any participating investor will be promptly transmitted to the Escrow Account in compliance with Rule 15c2-4 of the Exchange Act; and (iv) upon request of the Company or the placement agent, the Escrow Agent will notify the Company or the placement agent, as applicable, in writing of the balance of the Escrow Account (the “Investor Funds”).

Payments under a Subscription Agreement are required to be sent to the Escrow Agent in accordance with the terms of the Subscription Agreement. All payments must be made in United States currency by personal check, bank draft, cashier’s check, ACH, or federal funds wire transfer. All personal checks or cashier’s checks delivered to the Escrow Agent shall be made payable to “Delaware Trust Company, as Escrow Agent for HeartBeam, Inc.” In the event that the placement agent directly receives any payment from a participating investor in connection with the purchase of any securities, the payment will be transmitted to and deposited into the Escrow Account by the placement agent within one day after receipt. All subscription agreements and when funds are made are irrevocable.

The placement agent will record each Subscription Agreement in an electronic logbook which will be shared periodically with the company for verification purposes. Information contained within the electronic logbook will include the date of the subscription agreement, subscriber name, number of shares the subscriber agreed to purchase, and total payment amount to be sent to the Escrow Agent. The placement agent will perform accuracy checks to ensure each Subscription Agreement has been completed, signed, and successfully reflected on the electronic logbook.

A fully executed Subscription Agreement is irrevocable, and may only be terminated in limited circumstances, including breach of terms of the Subscription Agreement, or by the placement agent if it believes that such investment compromises the integrity of the placement agent’s legal and contract obligations. Accordingly, subscribers cannot withdraw their funds during the offering period regardless of whether the price of the securities offered increases or decreases significantly between the time a Subscription Agreement is executed and delivered and the closing of the offering. Once a Subscription Agreement is accepted, it will be executed without reconfirmation to or from the participating investor, and the participating investor cannot withdraw the Subscription Agreement.

In accordance with the Subscription Agreement and the Escrow Agreement among the Escrow Agent, the placement agent and the Company, the Escrow Agent will be instructed on or before 10:00 a.m., New York time, on the date of the closing of this offering, to either: (i) release the Investor Funds to the Company for purposes of purchasing the securities and the Company will concurrently deliver the securities purchased at the closing of this offering to the participating investors, which delivery shall be made through the facilities of DTC, or (ii) if the Company will not proceed with the offering and all investor funds will be promptly returned to the applicable participating investors without interest in accordance with Exchange Act rules 10b-9 and 15c2-4.

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The closing shall take place at the office of the placement agent or such other location as the Company and the placement agent shall mutually agree. All actions taken at the closing shall be deemed to have occurred simultaneously on the date of the closing of the offering.

Indemnification

We have agreed to indemnify the placement agent against certain liabilities, including certain liabilities arising under the Securities Act of 1933, as amended (the “Securities Act”), or to contribute to payments that the placement agent may be required to make for 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 might be deemed to be placement agent fees 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.

Electronic Distribution

A prospectus in electronic format may be made available on a website maintained by the placement agent and the placement agent may distribute prospectuses electronically. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the placement agent and should not be relied upon by investors.

Lock-up Agreements

Our officers and directors have agreed to be subject to a lock-up period of 180 days following the closing of this offering. This means that, during the applicable lock-up period, those persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock. Certain limited transfers are permitted during the lock-up period if the transferee agrees to these lock-up restrictions, including the right to sell any shares of common stock received on the exercise of a restricted stock unit. The Company is subject to a one year lock-up on its being able to sell shares of common stock or securities convertible into common stock without the permission of the placement agent and filing any registration statement relating to the offering of shares of capital stock. It is also restricted for the same one year period in its use of the current at-the-market offering arrangement it has with A.G.P./Alliance Global Partners, subject to approval of any puts by the placement agent and certain minimum market standards. The Company is permitted to issue stock and stock options or stock awards to directors, officers and employees under our existing plans. Public Ventures may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements.

Other Relationships

The placement agent and its affiliates have engaged, and may in the future engage, in investment banking transactions and other commercial dealings in the ordinary course of business with us or our affiliates. The placement agent has received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the placement agent and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The placement agents and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is VStock Transfer with an address of 18 Lafayette Place Woodmere, New York 11598.

The Nasdaq Capital Market Listing

Our Common Stock and warrants are currently listed on The Nasdaq Capital Market under the symbol “BEAT” And “BEATW”, respectively.

This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

DESCRIPTION OF SECURITIES

Authorized and Outstanding Capital Stock

The following description of the Company's capital stock and provisions of its Articles of Incorporation and Bylaws are summaries and are qualified by reference to the Company's Articles of Incorporation and Bylaws which are filed as exhibits to the registration statement of which this prospectus forms a part.

The Company is authorized to issue 110,000,000 shares of capital stock, consisting of 100,000,000 shares of Common Stock, par value \$0.0001 per share and 10,000,000 shares of Preferred Stock, par value \$0.0001 per share.

As of December 31, 2022, the Company had 8,009,743 outstanding shares of Common Stock held by approximately 50 shareholders of record.

Common Stock

The holders of our Common Stock are entitled to one vote per share. In addition, the holders of our Common Stock will be entitled to receive dividends ratably, if any, declared by our board of directors out of legally available funds; however, the current policy of the board of directors is to retain earnings, if any, for operations and growth. Upon liquidation, dissolution or winding-up, the holders of our Common Stock are entitled to share ratably in all assets that are legally available for distribution. The holders of our Common Stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of holders of our Common Stock are subject to, and may be adversely affected by, the rights of the holders of any series of preferred stock, which may be designated solely by action of the board of directors and issued in the future.

Preferred Stock

Our Board of Directors will have the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock 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.

Indemnification of Directors and Officers

Each of our Articles of Incorporation and our Bylaws provide for indemnification of our directors and officers. Our Bylaws provide that we will indemnify any person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director or officer of the corporation, against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Company, and with respect to any criminal action or proceeding, had no reasonable cause to believe such 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 will not, without more, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interest of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful. We may by action of our Board of Directors, grant rights to indemnification and advancement of expenses to employees and agents of the Company with the same scope and effects as the indemnification provisions for officers and directors.

Disclosure of Commission Position on Indemnification for Securities Act Liabilities

Insofar as indemnification for liabilities under the Securities Act may be permitted to officers, directors or persons controlling the Company pursuant to the foregoing provisions, the Company has been informed that it is the opinion of the Securities and Exchange Commission that such indemnification is against public policy as expressed in such Securities Act and is, therefore, unenforceable.

2022 Equity Incentive Plan

On June 15, 2022, our Board of Directors approved the 2022 Equity Incentive Plan (“2022 Equity Plan”), to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to employees, directors, and consultants, and to promote the success of the Company’s business. The 2022 Equity Plan provides for the grant of stock options and restricted stock awards (“RSUs”) to purchase common stock. The Board of Directors approved 1,900,000 shares of Common Stock issuance under the 2022 Equity Plan.

As of December 31, 2022, there were 747,364 shares available for issuance under the 2022 Equity Plan. The number of shares available for issuance under the 2022 Equity Plan will be increased on the first day of each fiscal year beginning with the 2023 fiscal year, in an amount equal to the least of 3,800,000 Shares, five percent (5%) of the total number of shares of all classes of common stock of the Company outstanding on the last day of the immediately preceding fiscal year, and a lesser number of Shares determined by the Administrator. On January 1, 2023 400,487 shares were added to the shares available for issuance under the 2022 Equity Plan.

Eligible recipients of option awards are employees, officers, consultants, attorneys, advisors or directors (including non-employee directors) of the Company or of any parent, subsidiary or affiliate of the Company. The Board of Directors has the authority to grant to any eligible recipient any options, restricted stock or other awards valued in whole or in part by reference to, or otherwise based on, the Company’s Common Stock; provided, however, that Incentive Options may only be granted to employees of the Company or its subsidiaries.

The provisions of each option granted need not be the same with respect to each option recipient. Option recipients have entered into award agreements with the Company, in such form as the full Board of Directors has determined.

The 2022 Equity Plan is administered by the Board of Directors.

LEGAL MATTERS

The validity of the Common Stock offered by us in this offering will be passed upon for us by Lucosky Brookman LLP, Woodbridge, New Jersey. Certain legal matters will be passed upon for the placement agent by Golenbock Eiseman Assor Bell & Peskoe, LLP, New York City, New York.

EXPERTS

The financial statements as of and for the year ended December 31, 2022 incorporated by reference in this registration statement have been audited by Marcum LLP, an independent registered public accounting firm, as stated in their report (the report on the financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern). Such financial statements are incorporated by reference in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

The financial statements as of and for the year ended December 31, 2021 incorporated by reference in this registration statement have been audited by Friedman LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the shares 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 the Company and the securities being offered under this prospectus, please refer to the complete registration statement and the exhibits and schedules filed as a part of the registration statement.

You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The SEC's Internet site can be found at <http://www.sec.gov>. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and other reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge on the SEC's website.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

SEC rules allow us to “incorporate by reference” into this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference into this prospectus, including the consolidated financial statements, is considered to be part of this prospectus. These documents may include Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements. You should read the information incorporated by reference because it is an important part of this prospectus.

This prospectus incorporates by reference the documents listed below, other than those documents or the portions of those documents deemed to be furnished and not filed in accordance with SEC rules:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2022, filed with the SEC on March 16, 2023;
- our Current Reports on Form 8-K filed with the SEC on [January 24, 2023](#), [February 2, 2023](#), [March 3, 2023](#), [March 8, 2023](#), [March 9, 2023](#), [March 13, 2023](#) and [March 24, 2023](#); and
- our 2022 equity incentive plan on Form S-8 filed with the SEC [July 13, 2022](#);

All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any report or document that is not deemed filed under such provisions, (i) on or after the date of filing of the registration statement containing this prospectus and prior to the effectiveness of the registration statement and (ii) on or after the date of this prospectus until the earlier of the date on which all of the securities registered hereunder have been sold or this prospectus has been withdrawn, shall be deemed incorporated by reference in this prospectus and to be a part of this prospectus from the date of filing of those documents. The information in documents that we file in the future will update and supersede the information currently included and incorporated by reference in this prospectus. Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02 or 7.01 of Form 8-K.

These documents may also be accessed on our website at <https://www.heartbeam.com/>. Information contained in, or accessible through, our website is not a part of this prospectus.

We will provide without charge to each person, including any beneficial owners, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all reports or documents referred to above which have been or may be incorporated by reference into this prospectus but not delivered with this prospectus, excluding exhibits to those reports or documents unless they are specifically incorporated by reference into those documents. You may request a copy of these documents by writing or telephoning us at the following address:

Branislav Vajdic
Chief Executive Officer
HeartBeam, Inc.
2118 Walsh Avenue, Suite 210
Santa Clara, CA 95050
Telephone: 408-899-4443



HEARTBEAM, INC.

PROSPECTUS

PUBLIC VENTURES, LLC

, 2023

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.**

The following table sets forth the expenses in connection with this registration statement. All of such expenses are estimates, other than the filing fees payable to the Securities and Exchange Commission and to FINRA.

	Amount to be paid
SEC registration fee	\$ 3,100
FINRA filing fee	\$ 15,500
Accounting fees and expenses	\$ 65,000
Legal fees and expenses	\$ 110,000
Printing and engraving expenses	\$ 25,000
Miscellaneous	\$ 31,400
Total	\$ 250,000

All amounts are estimated except the SEC registration fee, the FINRA filing fee, and The Nasdaq Capital Market initial listing fee.

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Our Articles of Incorporation and our Bylaws provide for indemnification of our directors and officers. Our Bylaws provide that we will indemnify any person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director or officer of the corporation, against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Company, and with respect to any criminal action or proceeding, had no reasonable cause to believe such 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 will not, without more, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interest of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful. The Company may by action of its Board of Directors, grant rights to indemnification and advancement of expenses to employees and agents of the Company with the same scope and effects as the indemnification provisions for officers and directors.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

The following sets forth information regarding all unregistered securities sold by the registrant in the three years preceding the date of this registration statement;

- 1 On November 11, 2021 the Company issued 1,497,216 shares of Common Stock from the conversion of the 2015 Notes.
- 2 On November 15, 2021, in connection with the IPO, the Company issued 192,500 warrants (the "Underwriter Warrants") to purchase Common Stock as compensation to the Underwriter, exercisable at a per share exercise price equal to \$7.50 per share. The Underwriter Warrants will expire five years from the date of issuance and are subject to a 180-day lock-up period.
- 3 On January 14, 2022, the Company issued 78,025 shares of Common Stock to a consulting firm for services that were related to the IPO.
- 4 On February 18, 2022, the Company entered into a stock purchase agreement pursuant to which the Company agreed to issue and sell to OpenSky Opportunities Fund Ltd. an aggregate of 58,000 units, with each unit consisting of one share of Common Stock and Warrants to purchase one share of Common Stock at a combined price of \$6.00 per Unit. The Warrants have an exercise price of \$6.00 per share and will expire five years from the date of issuance and are subject to a 180-day lock-up period.

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- 5 On February 28, 2023 we entered into a securities purchase agreement and a note purchase agreement, each as amended March 7, 2023 (“SPA”, “NPA” or together “Agreements”) with Maverick Capital Partners, LLC (“Maverick” or “Investor”). Pursuant to the terms of the Agreements, as amended, we agreed to sell up to \$4,000,000 of our common stock at 75% of the average calculated Volume Weighted Average Price (“VWAP”) per share during a Drawdown Pricing Period as defined in the Agreements. We issued a \$500,000 Convertible Note to the Investor pursuant to the NPA. On March 9, 2023 the Convertible Note was settled upon the execution of a SPA and related issuance of 0.2 million shares of common stock pursuant to the SPA drawdown notice dated March 7, 2023. The 0.2 million shares of common stock were registered under our registration statement on Form S3 dated February 10, 2023 and the related prospectus supplement dated March 9, 2023.

These issuances were made in reliance on an exemption from registration set forth in Section 4(a)(2) of the Securities Act, as transactions by an issuer not involving a public offering.

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;
 - (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 20% change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement.
 - (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;
- (2) That, for the purpose of determining any liability under the Securities Act, 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, if the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act 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

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underwriting 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.

Insofar as indemnification for liabilities arising under the Securities Act 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 SEC 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.

The undersigned registrant hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreements certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

The undersigned registrant hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act, 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.
- (2) For the purpose of determining any liability under the Securities Act, 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.

ITEM 16. Exhibits.

The following exhibits are filed as part of this registration statement:

Exhibit Number	Exhibit Description	Incorporated by Reference		Filed or Furnished	
		Form	Exhibit	Filing Date	Herewith
1.1*	Form of Placement Agent Agreement				
3.1	Articles of Incorporation filed with the State of Delaware on June 11, 2015.	S-1	3.1	09/07/2021	
3.2	Bylaws	S-1	3.2	09/07/2021	
3.3	Amendment to Articles of Incorporation filed with the State of Delaware on September 27, 2021.	S-1/A	3.3	10/04/2021	
3.4	Second Amended and Restated Articles of Incorporation dated November 15, 2022.	8-K	3.1	11/17/2022	
4.13*	Form of Placement Agent's Warrant				
5.1**	Opinion of Lucosky Brookman LLP				
10.1	Employment Agreement with Branislav Vajdic	S-1/A	10.1	10/04/2021	
10.2	Employment Agreement with Richard Brounstein	S-1/A	10.2	10/04/2021	
10.3	Employment Agreement with Jon Hunt	S-1/A	10.3	10/04/2021	
10.4	Employment Agreement with Ken Persen, dated August 2, 2022	8-K	10.2	08/08/2022	
10.5	Employment Agreement with Robert Eno, dated January 16, 2023	8-K	10.02	01/24/2023	
10.6	Supplemental Agreement between HeartBeam, Inc. and LIVMOR, Inc. dated August 2, 2022	8-K	10.1	08/08/2022	
10.7	2022 Equity Incentive Plan	8-K	10.1	06/16/2022	
10.8	Form of Professional Services Agreement between Triple Ring and HeartBeam, Inc. dated March 7, 2022	8-K	10.1	03/10/2022	
10.9	Stock Purchase Agreement, dated February 18, 2022 by and between HeartBeam, Inc. and the Purchaser with the Form of Warrant	8-K	10.1	02/22/2022	
10.10	Partnership Agreement between HeartBeam, Inc. and LIVMOR, Inc. dated January 31, 2022	8-K	10.1	02/02/2022	
10.11	Sales Agreement by and between HeartBeam, Inc. and A.G.P./Alliance Global Partners, dated February 1, 2023.	8-K	10.1	02/01/2023	
10.12	Securities Purchase Agreement dated February 28, 2023 between HeartBeam Inc. and Investors	8-K	10.1	03/03/2023	
10.13	Note Purchase Agreement dated February 28, 2023 between HeartBeam Inc. and Investors	8-K	10.2	03/03/2023	
10.14	First Amendment to Securities Purchase Agreement dated March 7, 2023 to the Securities Purchase Agreement dated February 28, 2023 between HeartBeam Inc. and Investors	8-K	10.1	03/09/2023	
10.15	First Amendment to Note Purchase Agreement dated March 7, 2023 to the Securities Purchase Agreement dated February 28, 2023 between HeartBeam Inc. and Investors	8-K	10.2	03/09/2023	
10.16**	Form of Subscription Agreement for the offering				
10.17**	Form of Escrow Agreement for the offering				
23.1*	Consent of Marcum LLP				
23.2*	Consent of Friedman LLP				
23.3**	Consent of Lucosky Brookman LLP (included as Exhibit 5.1)				
24**	Power of Attorney (included in the signature page of this Registration Statement)				
107**	Filing Fee Table				

+ To be filed by amendment.
 * Filed herewith
 ** Previously Filed

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Santa Clara, State of California, on the 17th day of April 2023.

HEARTBEAM, INC.	
By: <u> /s/ Branislav Vajdic </u>	
Name: Branislav Vajdic	
Title: Chief Executive Officer	

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u> /s/ Branislav Vajdic </u> Branislav Vajdic	Chief Executive Officer and Director (Principal Executive Officer)	April 17, 2023
<u> /s/ * </u> Richard Brounstein	Chief Financial Officer (Principal Financial and Accounting Officer)	April 17, 2023
<u> /s/ * </u> Richard Ferrari	Executive Chairman of the Board of Directors	April 17, 2023
<u> /s/ * </u> George deUrioste	Director	April 17, 2023
<u> /s/ * </u> Marga Ortigas-Wedekind	Director	April 17, 2023
<u> /s/ * </u> Willem Elfrink	Director	April 17, 2023

* Attorney-in Fact

PLACEMENT AGENCY AGREEMENT

April [], 2023

Public Ventures, LLC
4209 Meadowdale Lane
Dallas, Texas 95220

Attention: Investment Banking

Ladies and Gentlemen:

Introduction. Subject to the terms and conditions herein (this "Agreement"), HeartBeam, Inc., a Delaware corporation (the "Company"), hereby agrees to sell up to an aggregate of \$25,000,000 of registered securities (the "Securities"), in an offering of shares (the "Shares") of the Company's common stock, \$0.0001 par value, per share (the "Common Stock"), directly to various investors (each, an "Investor" and, collectively, the "Investors") through Public Ventures, LLC ("PV"), as Placement Agent (the "Placement Agent"). The documents executed and delivered by the Company and the Investors in connection with the "Offering" (as defined below), including, without limitation, a securities purchase agreement (the "Purchase Agreement"), shall be collectively referred to herein as the "Transaction Documents." The purchase price to the Investors for each Share is \$1.50, to be initially deposited in an escrow account until the "Closing" (defined below) of the Offering. The Placement Agent may retain other brokers or dealers to act as sub-agents or selected-dealers on their behalf in connection with the Offering. The Offering is on a best efforts, no minimum basis.

The Company hereby confirms its agreement with the Placement Agent as follows:

Section 1. Agreement to Act as Placement Agent

(a) On the basis of the representations, warranties and agreements of the Company herein contained, and subject to all the terms and conditions of this Agreement, the Placement Agent shall be the exclusive placement agent in connection with the offering and sale by the Company of the Securities pursuant to the Company's registration statement on Form S-1 (File No. 333-269717) (the "Registration Statement"), with the terms of the offering (the "Offering") to be subject to market conditions and negotiations between the Company, the Placement Agent and the prospective Investors. The Placement Agent will act on a commercially, reasonable best efforts basis and the Company agrees and acknowledges that there is no guarantee of the successful placement of the Securities, or any portion thereof, in the prospective Offering. Under no circumstances will the Placement Agent or any of their "Affiliates" (as defined below) be obligated to underwrite or purchase any of the Securities for their own account or otherwise provide any financing to the Company. The Placement Agent shall act solely as the Company's agent and not as principal. The Placement Agent shall have no authority to bind the Company with respect to any prospective offer to purchase the Securities and the Company shall have the sole right to accept offers to purchase the Securities and may reject any such offer, in whole or in part. Subject to the terms and conditions hereof, payment of the purchase price for, and delivery of, the Securities shall be made at one closing (the "Closing" and the date on which the Closing occurs, a "Closing Date"). The Closing shall occur via "Delivery Versus Payment", i.e., on the Closing Date. The Company shall issue the Securities directly to one or more accounts designated by the Placement Agent and, upon receipt of the Securities, the Placement Agent, to the extent it has received any Securities on behalf of Investors, shall electronically deliver the Securities to the applicable Investors. Payment for the Securities shall be made by instruction countersigned by the Placement Agent and Company, from an escrow account holding the Investors' subscription amounts in the name of the Company held by Delaware Trust Company, as escrow agent, by wire transfer to the Company. As compensation for services rendered, on the Closing Date, the Company shall pay to the Placement Agent the fees and expenses set forth below:

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(b) A cash fee equal to 6.35% of the gross proceeds received by the Company from the sale of the Securities at the closing of the Offering (the "Closing").

(c) Such number of Common Stock purchase warrants (the "PV Warrants") to be issued to PV or its designees at the Closing to purchase shares of Common Stock equal to 10.0% of the aggregate number of Shares sold in the Offering. The PV Warrants shall have an exercise price of 125% of the public offering price per share and shall have an expiration date of 5 years from the effective date of the Registration Statement. The PV Warrants shall not be transferable for six months from the date of the Offering except as permitted by Financial Industry Regulatory Authority ("FINRA") Rule 5110(c)(2). The PV Warrants will have other customary terms of placement agent warrants, including registration rights and cashless exercise rights.

(d) Reserved.

(e) The term of the Placement Agent's exclusive engagement will be until the completion of the Offering (the "Exclusive Term"); provided, however, that a party hereto may terminate the engagement with respect to itself at any time upon 10 days written notice to the other parties. Notwithstanding anything to the contrary contained herein, the provisions concerning confidentiality, indemnification and contribution contained herein and the Company's obligations contained in the indemnification provisions will survive any expiration or termination of this Agreement, and the Company's obligation to pay fees actually earned and payable and to reimburse expenses actually incurred and reimbursable pursuant to Section 1 hereof and which are permitted to be reimbursed under FINRA Rule 5110(f)(2)(D)(i), will survive any expiration or termination of this Agreement. Nothing in this Agreement shall be construed to limit the ability of the Placement Agent or their Affiliates to pursue, investigate, analyze, invest in, or engage in investment banking, financial advisory or any other business relationship with Persons (as defined below) other than the Company. As used herein (i) "Persons" 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 and (ii) "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 of 1933, as amended (the "Securities Act").

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Section 2. Representations, Warranties and Covenants of the Company. The Company hereby represents, warrants and covenants to the Placement Agent as of the date hereof, and as of the Closing Date, as follows:

(a) Securities Law Filings. The Company has filed with the Securities and Exchange Commission (the "Commission") the Registration Statement under the Securities Act, which was filed on February 10, 2023, supplemented on April 10, 2023 and declared effective on _____, 2023 for the registration of the Securities under the Securities Act. Following the determination of pricing of the Securities, the Company will file with the Commission pursuant to Rules 430A and 424(b) under the Securities Act, and the rules and regulations (the "Rules and Regulations") of the Commission promulgated thereunder, a final prospectus relating to the placement of the Securities, the pricing, and the plan of distribution thereof and will advise the Placement Agent of all further information (financial and other) with respect to the Company required to be set forth therein. Such registration statement, at any given time, including the exhibits thereto filed at such time, as amended at such time, is

hereinafter called the “Registration Statement”; such prospectus in the form in which it appears in the Registration Statement at the time of effectiveness is hereinafter called the “Base Prospectus”; and the final prospectus, in the form in which it will be filed with the Commission pursuant to Rules 430A and/or 424(b) (including the Base Prospectus as it may be amended or supplemented) is hereinafter called the “Final Prospectus.” The Registration Statement at the time it originally became effective is hereinafter called the “Original Registration Statement.” Any reference in this Agreement to the Registration Statement, the Original Registration Statement, the Base Prospectus or the Final Prospectus shall be deemed to refer to and include the documents incorporated by reference therein (the “Incorporated Documents”), if any, which were or are filed under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), at any given time, as the case may be; and any reference in this Agreement to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement, the Original Registration Statement, the Base Prospectus or the Final Prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act after the date of this Agreement, or the issue date of the Base Prospectus or the Final Prospectus, as the case may be, deemed to be incorporated therein by reference. All references in this Agreement to financial statements and schedules and other information which is “contained,” “included,” “described,” “referenced,” “set forth” or “stated” in the Registration Statement, the Base Prospectus or the Final Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in the Registration Statement, the Base Prospectus or the Final Prospectus, as the case may be. As used in this paragraph and elsewhere in this Agreement, “Time of Sale Disclosure Package” means the Base Prospectus, and any issuer free writing prospectus as defined in Rule 433 of the Act (each, an “Issuer Free Writing Prospectus”), if any, that the parties hereto shall hereafter expressly agree in writing to treat as part of the Time of Sale Disclosure Package. The term “any Prospectus” shall mean, as the context requires, the Base Prospectus, the Final Prospectus, and any supplement to either thereof. The Company has not received any notice that the Commission has issued or intends to issue a stop order suspending the effectiveness of the Registration Statement or the use of the Base Prospectus or intends to commence a proceeding for any such purpose.

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(b) Assurances. The Original Registration Statement, as amended, (and any further documents to be filed with the Commission that are incorporated by reference into the Original Registration Statement) contains all exhibits and schedules as required by the Securities Act. Each of the Registration Statement and any post-effective amendment thereto, at the time it became effective, complied in all material respects with the Securities Act and the applicable Rules and Regulations and did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Base Prospectus, and the Final Prospectus, each as of its respective date, comply or will comply in all material respects with the Securities Act and the applicable Rules and Regulations. Each of the Base Prospectus and the Final Prospectus, as amended or supplemented, did not and will not contain as of the date thereof any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Incorporated Documents, when they were filed with the Commission, conformed in all material respects to the requirements of the Exchange Act and the applicable Rules and Regulations promulgated thereunder, and none of such documents, when they were filed with the Commission, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein (with respect to Incorporated Documents incorporated by reference in the Base Prospectus or Final Prospectus), in light of the circumstances under which they were made not misleading. No post-effective amendment to the Registration Statement reflecting any facts or events arising after the date thereof which represent, individually or in the aggregate, a fundamental change in the information set forth therein is required to be filed with the Commission. Except for this Agreement, there are no documents required to be filed with the Commission in connection with the transaction contemplated hereby that (x) have not been filed as required pursuant to the Securities Act, or (y) will not be filed within the requisite time period. Except for this Agreement, there are no contracts or other documents required to be described in the Base Prospectus or Final Prospectus, or to be filed as exhibits or schedules to the Registration Statement, which have not been described or filed as required.

(c) Offering Materials. Neither the Company nor any of its directors and officers has distributed, and none of them will distribute, prior to the Closing Date, any offering material in connection with the offering and sale of the Securities other than the Time of Sale Disclosure Package.

(d) Subsidiaries. If any, all of the direct and indirect subsidiaries of the Company (the “Subsidiaries”) are set forth in the Incorporated Documents. To the extent the Company owns any subsidiaries, the Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any liens, charges, security interests, encumbrances, rights of first refusal, preemptive rights or other restrictions (collectively, “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, but future Subsidiaries will not be disregarded to the extent a representation, warranty or covenant applies to a time after the date hereof.

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(e) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing 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 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 this Agreement or any other agreement entered into between the Company and the Investors, (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 this Agreement or the transactions contemplated under the Prospectus Supplement (any of (i), (ii) or (iii), a “Material Adverse Effect”) and no an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened (“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.

(f) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and the Time of Sale Disclosure Package and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of each of this Agreement by the Company and the consummation by it of the transactions contemplated hereby and thereby and under the Base Prospectus have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Company’s Board of Directors (the “Board of Directors”) or the Company’s stockholders in connection therewith other than in connection with the Required Approvals (as defined below). This Agreement has been duly executed by the Company and, when delivered in accordance with the terms hereof, 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 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.

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(g) No Conflicts. The execution, delivery and performance by the Company of this Agreement and the transactions contemplated pursuant to the Time of Sale Disclosure Package, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby to which it is a party 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, 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, 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.

(h) 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 this Agreement and the transactions contemplated pursuant to the Base Prospectus, other than: (i) the filing with the Commission of the Final Prospectus, (ii) application(s) to the Nasdaq Capital Market (the "Trading Market") for the listing of the Securities for trading thereon in the time and manner required thereby and (iii) such filings as are required to be made under applicable state securities laws (collectively, the "Required Approvals").

(i) Issuance of the Securities; Registration. The Securities are duly authorized and, when issued and paid for in accordance with the Final Prospectus, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The shares underlying the PV Warrants, when issued in accordance with the terms of the PV Warrants, will be validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to the Final Prospectus.

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(j) Capitalization. The capitalization of the Company is as set forth in the Incorporated Documents. 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 equity incentive plans and pursuant to the conversion and/or exercise of securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time any Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants 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 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 this Agreement and the transactions contemplated pursuant to the Base Prospectus. Except as a result of the purchase and sale of the Securities or as set forth in the SEC Reports, 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 Investors) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. Except as set forth in the SEC Reports, 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. All of the outstanding shares of capital stock of the Company are validly issued, fully paid and nonassessable, have been issued in compliance with all 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. 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 stockholder 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.

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(k) 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 two years 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 Prospectus and any prospectus supplement, 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 Company has never been an issuer subject to Rule 144(i) under the Securities Act. 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.

(l) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, except as specifically disclosed in a subsequent SEC Report filed prior to the date hereof and incorporated into the Base Prospectus, (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 material 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 equity incentive plans. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Securities contemplated by the Base Prospectus or disclosed in the Base Prospectus, 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

(m) 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 this Agreement and the transactions contemplated pursuant to the Time of Sale Disclosure Package 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.

(n) Labor Relations. No material 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. No executive officer of the Company or any Subsidiary, to the knowledge of the Company, 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.

(o) Compliance. Neither the Company nor any Subsidiary: (i) is 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 security issuance agreement, 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 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 securities laws, 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.

(p) 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.

(q) 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 Time of Sale Disclosure Package, 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.

(r) 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 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 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 in all material respects.

(s) Patents and Trademarks. 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 material 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”). Except as described in the SEC Reports, 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. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the SEC Reports, a notice (written or otherwise) of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as would 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, except as could not have or reasonably be expected to result in a Material Adverse Effect. 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.

(t) 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, including, but not limited to, directors and officers insurance coverage. 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.

(u) Transactions With Affiliates and Employees. Except as set forth in the Time of Sale Disclosure Package, 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, including stock option agreements under any stock option plan of the Company.

(v) Sarbanes-Oxley: Internal Accounting Controls. The Company and the Subsidiaries are in 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. Except as set forth in the SEC Reports, 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 Company's disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the Company's 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.

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(w) Certain Fees. Except as set forth in the Base Prospectus, no brokerage or finder's fees or commissions are or will be payable by the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by this Agreement and the transactions contemplated pursuant to the Base Prospectus. The Investors 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 this Agreement and the transactions contemplated pursuant to the Base Prospectus.

(x) 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.

(y) Registration Rights. Except for Maverick Capital Partners, LLC and A.G.P./Alliance Global Partners, 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. The Company has fulfilled all its obligations under any outstanding registration obligations, and in such fulfillment has complied with all laws, rules and regulations.

(z) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) 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. Except as set forth in the SEC Reports, 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. Except as set forth in the SEC Reports, 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.

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(aa) 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 Investors as a result of the Investors and the Company fulfilling their obligations or exercising their rights under this Agreement and the transactions contemplated pursuant to the Prospectus Supplement, including without limitation as a result of the Company's issuance of the Securities and the Investors' ownership of the Securities.

(bb) Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by this Agreement and the transactions contemplated pursuant to the Base Prospectus, the Company confirms that neither it nor any other Person acting on its behalf has provided any of the Investors 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 Time of Sale Disclosure Package. The Company understands and confirms that the Investors 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 Investors regarding the Company and, its Subsidiaries, their respective businesses and the transactions contemplated hereby, including the Time of Sale Disclosure Package, is true and correct 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 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 light of the circumstances under which they were made and when made, not misleading.

(cc) No Integrated Offering. 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.

(dd) Solvency. Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Securities hereunder, (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. The Time of Sale Disclosure Package incorporates 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. Neither the Company nor any Subsidiary is in default with respect to any Indebtedness.

(ee) 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 (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.

(ff) 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 the Foreign Corrupt Practices Act of 1977, as amended.

(gg) 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) 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.

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

(ii) Accountants. The Company's accounting firm is set forth in the Incorporated Documents. 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 years ending December 31, 2021 and 2022.

(jj) 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.

(kk) Office of Foreign Assets Control. Neither the Company nor any Subsidiary, and to the Company's knowledge, no 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”).

(ll) 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 Investor’s request.

(mm) 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 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.

(nn) 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, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

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(oo) Certificates. Any certificate signed by an officer of the Company and delivered to the Placement Agent or to counsel for the Placement Agent shall be deemed to be a representation and warranty by the Company to the Placement Agent as to the matters set forth therein.

(pp) Reliance. The Company acknowledges that the Placement Agent and the Investors will rely upon the accuracy and truthfulness of the foregoing representations and warranties and hereby consents to such reliance.

(qq) Forward-Looking Statements. No forward-looking statements (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in the Time of Sale Disclosure Package has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(rr) Statistical or Market-Related Data. Any statistical, industry-related and market-related data included or incorporated by reference in the Time of Sale Disclosure Package, are based on or derived from sources that the Company reasonably and in good faith believes to be reliable and accurate, and such data agree with the sources from which they are derived.

(ss) FINRA Affiliations. There are no affiliations with any FINRA member firm among the Company’s officers, directors or, to the knowledge of the Company, any five percent (5%) or greater stockholder of the Company.

Section 3. Delivery and Payment The Closing shall occur at the offices of Golenbock Eiseman Assor Bell & Peskoe, LLP, 711 Third Avenue, 17th Floor, New York City, New York 10017 (“PV Counsel”) (or at such other place as shall be agreed upon by the PV and the Company). Subject to the terms and conditions hereof, at the Closing payment of the purchase price for the Securities sold on such Closing Date shall be made by Federal Funds wire transfer, against delivery of the Securities, and the Securities shall be registered in such name or names and shall be in such denominations, as PV may request at least one business day before the time of purchase (as defined below).

Deliveries of the documents with respect to the purchase of the Securities, if any, shall be made at the offices of PV Counsel. All actions taken at a Closing shall be deemed to have occurred simultaneously.

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Section 4. Covenants and Agreements of the Company The Company further covenants and agrees with the Placement Agent as follows:

(a) Registration Statement Matters. The Company will advise the Placement Agent promptly after it receives notice thereof of the time when any amendment to the Registration Statement has been filed or becomes effective or any supplement to the Base Prospectus or the Final Prospectus has been filed and will furnish the Placement Agent with copies thereof. The Company will file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 14 or 15(d) of the Exchange Act subsequent to the date of any Prospectus and for so long as the delivery of a prospectus is required in connection with the Offering. The Company will advise the Placement Agent, promptly after it receives notice thereof (i) of any request by the Commission to amend the Registration Statement or to amend or supplement any Prospectus or for additional information, and (ii) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or any order directed at any Incorporated Document, if any, or any amendment or supplement thereto or any order preventing or suspending the use of the Base Prospectus or the Final Prospectus or any prospectus supplement or any amendment or supplement thereto or any post-effective amendment to the Registration Statement, of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, of the institution or threatened institution of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or a Prospectus or for additional information. The Company shall use its best efforts to prevent the issuance of any such stop order or prevention or suspension of such use. If the Commission shall enter any such stop order or order or notice of prevention or suspension at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment, or will file a new registration statement and use its best efforts to have such new registration statement declared effective as soon as practicable. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b), 430A, 430B and 430C, as applicable, under the Securities Act, including with respect to the timely filing of documents thereunder, and will use its reasonable efforts to confirm that any filings made by the Company under such Rule 424(b) are received in a timely manner by the Commission.

(b) Blue Sky Compliance. The Company and its counsel will qualify the Securities for sale under the securities laws of such jurisdictions (United States and foreign) as the Placement Agent and the Investors may reasonably request and will make such applications, file such documents, and furnish such information as may be reasonably required for that purpose, provided the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction where it is not now so qualified or required to file such a consent, and provided further that the Company shall not be required to produce any new disclosure document. The Company will, from time to time, prepare and file such statements, reports and other documents as are or may be required to continue such qualifications in effect for so long a period as the Placement Agent may reasonably request for distribution of the Securities. The Company will advise the Placement Agent promptly of the qualification of the Securities in the requested jurisdictions and of the suspension of the qualification or registration of (or any such exemption relating to) the Securities for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use its best efforts to obtain the withdrawal thereof at the earliest possible moment.

(c) Amendments and Supplements to a Prospectus and Other Matters. The Company will comply with the Securities Act and the Exchange Act, and the rules and regulations of the Commission thereunder, so as to permit the completion of the distribution of the Securities as contemplated in this Agreement, the Incorporated Documents and any Prospectus. If during the period in which a prospectus is required by law to be delivered in connection with the distribution of Securities contemplated by the Incorporated Documents or any Prospectus (the “Prospectus Delivery Period”), any event shall occur as a result of which, in the judgment of the Company or in the opinion of PV or counsel for PV, it becomes necessary to amend or supplement the Incorporated Documents or any Prospectus in order to make the statements therein, in the light of the circumstances under which they were made, as the case may be, not misleading, or if it is necessary at any time to amend or supplement the Incorporated Documents or any Prospectus or to file under the Exchange Act any Incorporated Document to comply with any law, the Company will promptly prepare and file with the Commission, and furnish at its own expense to the Placement Agent and to sub-agents and dealers, an appropriate amendment to the Registration Statement or supplement to the Registration Statement, the Incorporated Documents or any Prospectus that is necessary in order to make the statements in the Incorporated Documents and any Prospectus as so amended or supplemented, in the light of the circumstances under which they were made, as the case may be, not misleading, or so that the Registration Statement, the Incorporated Documents or any Prospectus, as so amended or supplemented, will comply with law. Before amending the Registration Statement or supplementing the Incorporated Documents or any Prospectus in connection with the Offering, the Company will furnish the Placement Agent with a copy of such proposed amendment or supplement and will not file any such amendment or supplement to which PV reasonably objects.

(d) Copies of any Amendments and Supplements to a Prospectus. The Company will furnish the Placement Agent, without charge, during the period beginning on the date hereof and ending on the Closing Date of the Offering, as many copies of any Prospectus or prospectus supplement and any amendments and supplements thereto, as the Placement Agent may reasonably request.

(e) Free Writing Prospectus. The Company covenants that it will not, unless it obtains the prior written consent of PV, make any offer relating to the Securities that would constitute an Company Free Writing Prospectus or that would otherwise constitute a “free writing prospectus” (as defined in Rule 405 of the Securities Act) required to be filed by the Company with the Commission or retained by the Company under Rule 433 of the Securities Act. In the event that PV expressly consents in writing to any such free writing prospectus (a “Permitted Free Writing Prospectus”), the Company covenants that it shall (i) treat each Permitted Free Writing Prospectus as an Company Free Writing Prospectus, and (ii) comply with the requirements of Rule 164 and 433 of the Securities Act applicable to such Permitted Free Writing Prospectus, including in respect of timely filing with the Commission, legending and record keeping.

(f) Transfer Agent. The Company will maintain, at its expense, a registrar and transfer agent for the Common Stock.

(g) Earnings Statement. As soon as practicable and in accordance with applicable requirements under the Securities Act, but in any event not later than 18 months after the Closing Date, the Company will make generally available to its security holders and to the Placement Agent an earnings statement, covering a period of at least 12 consecutive months beginning after the Closing Date, that satisfies the provisions of Section 11(a) and Rule 158 under the Securities Act.

(h) Periodic Reporting Obligations. During the Prospectus Delivery Period, the Company will duly file, on a timely basis, with the Commission and the Trading Market all reports and documents required to be filed under the Exchange Act within the time periods and in the manner required by the Exchange Act.

(i) Additional Documents. The Company will enter into any subscription, purchase or other customary agreements as the Placement Agent or the Investors deem necessary or appropriate to consummate the Offering, all of which will be in form and substance reasonably acceptable to the Placement Agent and the Investors. The Company agrees that the Placement Agent may rely upon, and it is a third-party beneficiary of, the representations and warranties, and applicable covenants, set forth in any such purchase, subscription or other agreement with Investors in the Offering.

(j) No Manipulation of Price. The Company will not take, directly or indirectly, any action designed to cause or result in, or that has constituted or might reasonably be expected to constitute, the stabilization or manipulation of the price of any securities of the Company.

(k) Acknowledgment. The Company acknowledges that any advice given by the Placement Agent to the Company is solely for the benefit and use of the Board of Directors of the Company and may not be used, reproduced, disseminated, quoted or referred to, without the prior written consent of PV.

(l) Announcement of Offering. The Company acknowledges and agrees that the Placement Agent may, subsequent to the Closing, make public their involvement with the Offering.

(m) Reliance on Others. The Company confirms that it will rely on its own counsel and accountants for legal and accounting advice.

(n) Research Matters. By entering into this Agreement, the Placement Agent does not provide any promise, either explicitly or implicitly, of favorable or continued research coverage of the Company, and the Company hereby acknowledges and agrees that the selection of PV as placement agent for the Offering was in no way conditioned, explicitly or implicitly, on the Placement Agent providing any favorable or any research coverage of the Company. In accordance with FINRA Rule 2711(e), the parties acknowledge and agree that the Placement Agent has not directly or indirectly offered favorable research, a specific rating or a specific price target, or threatened to change research, a rating or a price target, to the Company or inducement for the receipt of business or compensation.

(o) Subsequent Equity Sales; Company Lock-Up.

(i) Until the date that is one year after the Closing Date, the Company, on behalf of itself, its Subsidiaries and any successor entity thereto, agrees that, without the prior written consent of the Placement Agent, it will not, for a period of 12 months after the Closing Date (the “Company Lock-Up Period”), (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company; (ii) file or cause to be filed any registration statement with the Commission relating to the offering of any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company (other than a registration statement on Form S-8); (iii) complete any offering of debt securities of the Company, other than entering into a line of credit with a traditional bank or (iv) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of capital stock of the Company, whether any such transaction described in clause (i), (ii), (iii) or (iv) above is to be settled by delivery of shares of capital stock of the Company or such other securities, in cash or otherwise.

(ii) Until the date that is one year after the Closing Date, the Company, on behalf of itself, its Subsidiaries and any successor entity thereto, agrees that, without the prior written consent of the Placement Agent, it will not, during the Company Lock-Up Period issue shares of Common Stock pursuant to an “at-the-market offering” (“ATM”) facility under the Sales Agreement with A.G.P. / Alliance Global Partner, and any such issuance of Common Stock will have an ATM price per share that is at least \$3.00 on the day(s) that the ATM is used, with the following volume limitations: (1) the Company will limit the day(s) sales to no more than 10% of the Company’s Common Stock’s daily volume that day; or (2) up to 15% if the that day’s daily volume is at least 300,000 shares of Common Stock

(iii) The restrictions contained in Section 4(o)(i) shall not apply to the foregoing:

- a) the Securities and the PV Warrants and their underlying securities to be sold hereunder;
- b) the issuance by the Company of shares of Common Stock upon the exercise of stock-based awards under the Company’s 2015 and 2022 Equity Incentive Plans, provided that such stock-based awards 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 or to extend the term of such securities;
- c) Subject to shareholder approval, the Company may increase the authorized shares of the 2022 Equity Incentive Plan up to a total of five million shares and file an Amended Form S-8;

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- d) issuance by the Company of stock-awards of the Company under the 2022 Equity Incentive Plan of the Company; and
- e) the Company and AGP may file or cause to be filed any registration statement with the Commission relating to the use and maintenance of the ATM facility.
- f) PV may waive the provisions of this Section 4(o) at any time and from time to time.

Section 5. Conditions of the Obligations of the Placement Agent The obligations of the Placement Agent hereunder shall be subject to the accuracy of the representations and warranties on the part of the Company set forth in Section 2 hereof, in each case as of the date hereof and as of the Closing Date as though then made, to the timely performance by each of the Company of its covenants and other obligations hereunder on and as of such dates, and to each of the following additional conditions:

(a) Accountants’ Comfort Letter. On the date hereof, the Placement Agent shall have received, and the Company shall have caused to be delivered to the Placement Agent, a letter or letters from Friedman, LLP and Marcum LLP (the independent registered public accounting firm of the Company), addressed to the Placement Agent, dated as of the date hereof, in form and substance satisfactory to the Placement Agent. The letter shall not disclose any change in the condition (financial or other), earnings, operations, business or prospects of the Company from that set forth in the Incorporated Documents or the applicable Prospectus or prospectus supplement, which, in PV’s sole judgment, is material and adverse and that makes it, in PV’s sole judgment, impracticable or inadvisable to proceed with the Offering of the Securities as contemplated by such Prospectus.

(b) Compliance with Registration Requirements; No Stop Order; No Objection from the FINRA. Each Prospectus (in accordance with Rule 424(b)) and “free writing prospectus” (as defined in Rule 405 of the Securities Act), if any, shall have been duly filed with the Commission, as appropriate; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission; no order preventing or suspending the use of any Prospectus shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission; no order having the effect of ceasing or suspending the distribution of the Securities or any other securities of the Company shall have been issued by any securities commission, securities regulatory authority or stock exchange and no proceedings for that purpose shall have been instituted or shall be pending or, to the knowledge of the Company, contemplated by any securities commission, securities regulatory authority or stock exchange; all requests for additional information on the part of the Commission shall have been complied with; and the FINRA shall have raised no objection to the fairness and reasonableness of the placement terms and arrangements.

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(c) Corporate Proceedings. All corporate proceedings and other legal matters in connection with this Agreement, the Registration Statement and each Prospectus, and the registration, sale and delivery of the Securities and the PV Warrants (and underlying securities), shall have been completed or resolved in a manner reasonably satisfactory to the counsel of PV, and such counsel shall have been furnished with such papers and information as it may reasonably have requested to enable such counsel to pass upon the matters referred to in this Section 5.

(d) No Material Adverse Change. Subsequent to the execution and delivery of this Agreement and prior to the Closing Date, in PV’s sole judgment after consultation with the Company, there shall not have occurred any Material Adverse Effect or any material adverse change or development involving a prospective material adverse change in the condition or the business activities, financial or otherwise, of the Company from the latest dates as of which such condition is set forth in the Registration Statement and Prospectus (“Material Adverse Change”).

(e) Opinion of Counsel for the Company. On the date hereof, the Placement Agent shall have received the favorable opinion of US legal counsel to the Company, including without limitation a negative assurance letter, addressed to PV and in form and substance satisfactory to the Placement Agent.

(f) Officers’ Certificate. The Placement Agent shall have received on the Closing Date a certificate of the Company, dated as of such Closing Date, signed by the Chief Executive Officer and Chief Financial Officer of the Company, to the effect that, and the Placement Agent shall be satisfied that, the signers of such certificate have reviewed the Registration Statement, the Incorporated Documents, any Prospectus Supplement, and this Agreement and to the further effect that:

(i) The representations and warranties of the Company in this Agreement are true and correct, as if made on and as of such Closing Date, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to such Closing Date;

(ii) No stop order suspending the effectiveness of the Registration Statement or the use of any Prospectus has been issued and no proceedings for that purpose have been instituted or are pending or, to the Company’s knowledge, threatened under the Securities Act; no order having the effect of ceasing or suspending the distribution of the Securities or any other securities of the Company has been issued by any securities commission, securities regulatory authority or stock exchange in the United States and no proceedings for that purpose have been instituted or are pending or, to the knowledge of the Company, contemplated by any securities commission, securities regulatory authority or stock exchange in the United States;

(iii) When the Registration Statement became effective, at the time of sale, and at all times subsequent thereto up to the delivery of such certificate, the Registration Statement and the Incorporated Documents, if any, when such documents became effective or were filed with the Commission, and any Prospectus, contained all material information required to be included therein by the Securities Act and the Exchange Act and the applicable rules and regulations of the Commission thereunder, as the case may be, and in all material respects conformed to the requirements of the Securities Act and the Exchange Act and the applicable rules and regulations of the Commission thereunder, as the case may be, and the Registration Statement and the Incorporated Documents, if any, and any Prospectus, did not and do not include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (provided, however, that the preceding representations and warranties contained in this paragraph (iii) shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by the Placement Agent expressly for use therein) and, since the effective date of the Registration Statement, there has occurred no event required by the Securities Act and the rules and regulations of the Commission thereunder to be set forth in the Incorporated Documents which has not been so set forth; and

(iv) Subsequent to the respective dates as of which information is given in the Registration Statement, the Incorporated Documents and any Prospectus, there has not been: (a) any Material Adverse Change; (b) any transaction that is material to the Company and the Subsidiaries taken as a whole, except transactions entered into in the ordinary course of business; (c) any obligation, direct or contingent, that is material to the Company and the Subsidiaries taken as a whole, incurred by the Company or any Subsidiary, except obligations incurred in the ordinary course of business; (d) any material change in the capital stock (except changes thereto resulting from the exercise of outstanding stock options or warrants) or outstanding indebtedness of the Company or any Subsidiary; (e) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company; or (f) any loss or damage (whether or not insured) to the property of the Company or any Subsidiary which has been sustained or will have been sustained which has a Material Adverse Effect.

(g) Bring-down Comfort Letter. On the Closing Date, the Placement Agent shall have received from Freidman LLP, Marcum LLP, or such other independent registered public accounting firm of the Company as needed, a letter dated as of such Closing Date, in form and substance satisfactory to the Placement Agent, to the effect that they reaffirm the statements made in the letter furnished pursuant to subsection (a) of this Section 5, except that the specified date referred to therein for the carrying out of procedures shall be no more than two business days prior to such Closing Date.

(h) Bring-down Legal Opinion. On the Closing Date, the Placement Agent shall have received either the favorable opinion of US legal counsel to the Company, including without limitation a negative assurance letter, dated as of the Closing Date that is substantially the same as the opinion delivered to PV on the date of this Agreement, or a letter indicating that PV may rely on the legal opinion and negative assurance letter previously provided to PV as of the date of this Agreement, addressed to PV and in form and substance satisfactory to the Placement Agent.

(i) Stock Exchange Listing. The Common Stock shall be registered under the Exchange Act and shall be listed on the Trading Market, and the Company shall not have taken any action designed to terminate, or likely to have the effect of terminating, the registration of the Common Stock under the Exchange Act or delisting or suspending from trading the Common Stock from the Trading Market, nor shall the Company have received any information suggesting that the Commission or the Trading Market is contemplating terminating such registration or listing.

(j) Lock-Up Agreements. On the Closing Date, the Placement Agent shall have received the executed lock-up agreement, in the form attached hereto as Exhibit A, from each of the directors and officers (and Affiliates) of the Company. The lock-up agreement will provide that the securities that the directors and officer hold in the Company may not be sold for a period of 180 days following the consummation of the Offering. The restriction on sales will not apply to Securities purchased in the Offering or any securities purchased in the public market after the consummation of the Offering or to the securities underlying restricted stock units held by any of the directors and officers (and Affiliates). PV will have the right to release any of the securities subject to the lock-up provisions in its discretion.

(k) Additional Documents. On or before the Closing Date, the Placement Agent and counsel for PV shall have received such information and documents as they may reasonably require for the purposes of enabling them to pass upon the issuance and sale of the Securities as contemplated herein, or in order to evidence the accuracy of any of the representations and warranties, or the satisfaction of any of the conditions or agreements, herein contained.

(l) Post-Offering Board Composition. After the Closing Date, the Company and PV together will review the members of the board of directors of the Company and the number of directors of the Company to determine whether or not after the Closing of the Offering there should be any changes in the member composition and number of directors of the board of directors.

(m) Investor Communications; Investor Conference Calls. For a period of two (2) years after the Closing Date, the Company will host open quarterly conference calls for investors, analysts and others. The Company will provide to PV copies of all substantial press releases such as the quarterly financial results or new business announcements prior to making them public, for the reasonable advance review and comment by PV.

If any condition specified in this Section 5 is not satisfied when and as required to be satisfied, this Agreement may be terminated by PV by notice to the Company at any time on or prior to a Closing Date, which termination shall be without liability on the part of any party to any other party, except that Section 6 (Payment of Expenses), Section 7 (Indemnification and Contribution) and Section 8 (Representations and Indemnities to Survive Delivery) shall at all times be effective and shall survive such termination.

Section 6. Payment of Expenses. The Company agrees to pay all costs, fees and expenses incurred by the Company in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including, without limitation: (i) all expenses incident to the issuance, delivery and qualification of the Securities (including all printing and engraving costs); (ii) all fees and expenses of the registrar and transfer agent of the Common Stock; (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Securities; (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors; (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Base Prospectus, the Final Prospectus, and all amendments and supplements thereto, and this Agreement; (vi) all filing fees, reasonable attorneys' fees and expenses incurred by the Company or the Placement Agent in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Securities for offer and sale under the state securities or blue sky laws or the securities laws of any other country, and, if requested by the Placement Agent, preparing and printing a "Blue Sky Survey," an "International Blue Sky Survey" or other memorandum, and any supplements thereto, advising the Placement Agent of such qualifications, registrations and exemptions; (vii) if applicable, the filing fees incident to the review and approval by the FINRA of the Placement Agent's participation in the Offering and distribution of the Securities; (viii) the fees and expenses associated with

including the Shares on the Trading Market; (ix) all costs and expenses incident to the travel and accommodation of the Company's employees on the "Roadshow," if any; and (x) all other fees, costs and expenses referred to in Part II of the Registration Statement.

Section 7. Indemnification and Contribution.

(a) The Company agrees to indemnify and hold harmless the Placement Agent, their affiliates and each person controlling the Placement Agent (within the meaning of Section 15 of the Securities Act), and the directors, officers, agents and employees of the Placement Agent, their affiliates and each such controlling person (the Placement Agent, and each such entity or person, an "Indemnified Person") from and against any losses, claims, damages, judgments, assessments, costs and other liabilities (collectively, the "Liabilities"), and shall reimburse each Indemnified Person for all fees and expenses (including the reasonable fees and expenses of one counsel for all Indemnified Persons, except as otherwise expressly provided herein) (collectively, the "Expenses") as they are incurred by an Indemnified Person in investigating, preparing, pursuing or defending any Actions, whether or not any Indemnified Person is a party thereto, (i) caused by, or arising out of or in connection with, any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Incorporated Document, or any Prospectus or by any omission or alleged omission to state therein a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading (other than untrue statements or alleged untrue statements in, or omissions or alleged omissions from, information relating to an Indemnified Person furnished in writing by or on behalf of such Indemnified Person expressly for use in the Registration Statement, any Incorporated Documents or any Prospectus) or (ii) otherwise arising out of or in connection with advice or services rendered or to be rendered by any Indemnified Person pursuant to this Agreement, the transactions contemplated thereby or any Indemnified Person's actions or inactions in connection with any such advice, services or transactions; provided, however, that, in the case of clause (ii) only, the Company shall not be responsible for any Liabilities or Expenses of any Indemnified Person that are finally judicially determined to have resulted solely from such Indemnified Person's (x) gross negligence or willful misconduct in connection with any of the advice, actions, inactions or services referred to above or (y) use of any offering materials or information concerning the Company in connection with the offer or sale of the Securities in the Offering which were not authorized for such use by the Company and which use constitutes gross negligence or willful misconduct. The Company also agrees to reimburse each Indemnified Person for all Expenses as they are incurred in connection with enforcing such Indemnified Person's rights under this Agreement.

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(b) Upon receipt by an Indemnified Person of actual notice of an Action against such Indemnified Person with respect to which indemnity may be sought under this Agreement, such Indemnified Person shall promptly notify the Company in writing; provided that failure by any Indemnified Person so to notify the Company shall not relieve the Company from any liability which the Company may have on account of this indemnity or otherwise to such Indemnified Person, except to the extent the Company shall have been prejudiced by such failure. The Company shall, if requested by PV, assume the defense of any such Action including the employment of counsel reasonably satisfactory to the Placement Agent, which counsel may also be counsel to the Company. Any Indemnified Person 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 Indemnified Person unless: (i) the Company has failed promptly to assume the defense and employ counsel or (ii) the named parties to any such Action (including any impeded parties) include such Indemnified Person and the Company, and such Indemnified Person shall have been advised in the reasonable opinion of counsel that there is an actual conflict of interest that prevents the counsel selected by the Company from representing both the Company (or another client of such counsel) and any Indemnified Person; provided that the Company shall not in such event be responsible hereunder for the fees and expenses of more than one firm of separate counsel for all Indemnified Persons in connection with any Action or related Actions, in addition to any local counsel. The Company shall not be liable for any settlement of any Action effected without its written consent (which shall not be unreasonably withheld). In addition, the Company shall not, without the prior written consent of the Placement Agent (which shall not be unreasonably withheld), settle, compromise or consent to the entry of any judgment in or otherwise seek to terminate any pending or threatened Action in respect of which indemnification or contribution may be sought hereunder (whether or not such Indemnified Person is a party thereto) unless such settlement, compromise, consent or termination includes an unconditional release of each Indemnified Person from all Liabilities arising out of such Action for which indemnification or contribution may be sought hereunder. The indemnification required hereby shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as such expense, loss, damage or liability is incurred and is due and payable.

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(c) In the event that the foregoing indemnity is unavailable to an Indemnified Person other than in accordance with this Agreement, the Company shall contribute to the Liabilities and Expenses paid or payable by such Indemnified Person in such proportion as is appropriate to reflect (i) the relative benefits to the Company, on the one hand, and to the Placement Agent and any other Indemnified Person, on the other hand, of the matters contemplated by this Agreement or (ii) if the allocation provided by the immediately preceding clause is not permitted by applicable law, not only such relative benefits but also the relative fault of the Company, on the one hand, and the Placement Agent and any other Indemnified Person, on the other hand, in connection with the matters as to which such Liabilities or Expenses relate, as well as any other relevant equitable considerations; provided that in no event shall the Company contribute less than the amount necessary to ensure that all Indemnified Persons, in the aggregate, are not liable for any Liabilities and Expenses in excess of the amount of fees actually received by the Placement Agent pursuant to this Agreement. For purposes of this paragraph, the relative benefits to the Company, on the one hand, and to the Placement Agent on the other hand, of the matters contemplated by this Agreement shall be deemed to be in the same proportion as (a) the total value paid or contemplated to be paid to or received or contemplated to be received by the Company in the transaction or transactions that are within the scope of this Agreement, whether or not any such transaction is consummated, bears to (b) the fees paid to the Placement Agent under this Agreement. Notwithstanding the above, no person guilty of fraudulent misrepresentation within the meaning of Section 11(f) of the Securities Act, as amended, shall be entitled to contribution from a party who was not guilty of fraudulent misrepresentation.

(d) The Company also agrees that no Indemnified Person shall have any liability (whether direct or indirect, in contract or tort or otherwise) to the Company for or in connection with advice or services rendered or to be rendered by any Indemnified Person pursuant to this Agreement, the transactions contemplated thereby or any Indemnified Person's actions or inactions in connection with any such advice, services or transactions except for Liabilities (and related Expenses) of the Company that are finally judicially determined to have resulted solely from such Indemnified Person's gross negligence or willful misconduct in connection with any such advice, actions, inactions or services.

(e) The reimbursement, indemnity and contribution obligations of the Company set forth herein shall apply to any modification of this Agreement and shall remain in full force and effect regardless of any termination of, or the completion of any Indemnified Person's services under or in connection with, this Agreement.

Section 8. Representations and Indemnities to Survive Delivery. The respective indemnities, agreements, representations, warranties and other statements of the Company or any person controlling the Company, of its officers, and of the Placement Agent set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of the Placement Agent, the Company, or any of its or their partners, officers or directors or any controlling person, as the case may be, and will survive delivery of and payment for the Securities sold hereunder and any termination of this Agreement. A successor to PV, or to the Company, its directors or officers or any person controlling the Company, shall be entitled to the benefits of the indemnity, contribution and reimbursement agreements contained in this Agreement.

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Section 9. Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered, e-mailed or telecopied and confirmed to the parties hereto as follows:

If to PV, to the address set forth above and additionally to the contact information set forth below:

Public Ventures, LLC
c/o MDB Capital Holdings, LLC
4209 Meadowdale Lane
Dallas, Texas 95220
Email: d@MDB.com

With a copy to:

Golenbock Eiseman Assor Bell & Peskoe, LLP
711 Third Avenue – 17th Floor
New York, New York 10017
Email: ahudders@golenbock.com

If to the Company, to both the address and emails set forth below:

HeartBeam, Inc.
2118 Walsh Avenue, Suite 210
Santa Clara, CA 95050
Attention: Branislav Vajdic
Email: vajdic@gmail.com

With a copy to:

Soyoung Lee, Esq.
Lucosky Brookman
111 Broadway, Suite 807
New York, New York 10006
Email: slee@lucbro.com

Any party hereto may change the address for receipt of communications by giving written notice to the others.

Section 10. Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto, and to the benefit of the employees, officers and directors and controlling persons referred to in Section 7 hereof, and to their respective successors, and personal representative, and no other person will have any right or obligation hereunder.

Section 11. Partial Unenforceability. The invalidity or unenforceability of any section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph or provision hereof. If any Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

Section 12. Governing Law Provisions. This Agreement shall be deemed to have been made and delivered in New York City and both this engagement letter and the transactions contemplated hereby shall be governed as to validity, interpretation, construction, effect and in all other respects by the internal laws of the State of New York, without regard to the conflict of laws principles thereof. The Placement Agent and the Company: (i) agrees that any legal suit, action or proceeding arising out of or relating to this engagement letter and/or the transactions contemplated hereby shall be instituted exclusively in New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, (ii) waives any objection which it may have or hereafter to the venue of any such suit, action or proceeding, and (iii) irrevocably consents to the jurisdiction of the New York Supreme Court, County of New York, and the United States District Court for the Southern District of New York in any such suit, action or proceeding. The Placement Agent and the Company further agrees to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in the New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York and agrees that service of process upon the Company mailed by certified mail to the Company's address shall be deemed in every respect effective service of process upon the Company, in any such suit, action or proceeding, and service of process upon the Placement Agent mailed by certified mail to the address of PV shall be deemed in every respect effective service process upon the Placement Agent, in any such suit, action or proceeding. Notwithstanding any provision of this engagement letter to the contrary, the Company agrees that neither the Placement Agent nor its affiliates, and the respective officers, directors, employees, agents and representatives of the Placement Agent, its affiliates and each other person, if any, controlling the Placement Agent or any of its affiliates, shall have any liability (whether direct or indirect, in contract or tort or otherwise) to the Company for or in connection with the engagement and transaction described herein except for any such liability for losses, claims, damages or liabilities incurred by us that are finally judicially determined to have resulted from the willful misconduct or gross negligence of such individuals or entities. If either party shall commence an action or proceeding to enforce any provision of this Agreement, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its reasonable attorney's fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

Section 13. General Provisions.

(a) This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. Notwithstanding anything herein to the contrary, the Engagement Agreement, dated November 29, 2022 ("Engagement Agreement"), between the Company and PV, shall continue to be effective and the terms therein shall continue to survive and be enforceable by PV in accordance with its terms, provided that, in the event of a conflict between the terms of the Engagement Agreement and this Agreement, the terms of this Agreement shall prevail. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

(b) The Company acknowledges that in connection with the offering of the Securities: (i) the Placement Agent has acted at arms-length, other than as provided herein are not agents of, and owe no fiduciary duties to the Company or any other person, (ii) the Placement Agent owes the Company only those duties and obligations set forth in this Agreement, and (iii) the Placement Agent may have interests that differ from those of the Company. The Company waives to the full extent permitted by applicable law any claims it may have against the Placement Agent arising from an alleged breach of fiduciary duty in connection with the offering of the Securities.

If the foregoing is in accordance with your understanding of our agreement, please sign below whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms.

Very truly yours,

HEARTBEAM, INC.,
a Delaware corporation

By: _____
Name: Branislav Vajdic
Title: Chief Executive Officer

The foregoing Placement Agency Agreement is hereby confirmed and accepted as of the date first above written.

PUBLIC VENTURES, LLC

By: _____
Name: Anthony DiGiandomenico
Title: Head of Investment Banking

EXHIBIT A

THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY OTHER SECURITIES LAWS AND MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF (1) AN EFFECTIVE REGISTRATION STATEMENT COVERING SUCH SECURITIES UNDER THE SECURITIES ACT AND ANY OTHER APPLICABLE SECURITIES LAWS, OR (2) AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED.

IN ADDITION, THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE HEREOF MAY 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 SUCH SECURITIES BY ANY PERSON FOR A PERIOD OF ONE HUNDRED EIGHTY (180) DAYS IMMEDIATELY FOLLOWING THE DATE OF EFFECTIVENESS OF THE PUBLIC OFFERING OF THE COMPANY'S SECURITIES PURSUANT TO REGISTRATION STATEMENT NO.: 333-269717 AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION, EXCEPT IN ACCORDANCE WITH FINRA RULE 5110(G)(2).

HEARTBEAM, INC.

PLACEMENT AGENT WARRANT

[] shares of Common Stock

[April] [], 2023

This **PLACEMENT AGENT WARRANT** (this "**Warrant**") of Heartbeam, Inc., a corporation, duly organized and validly existing under the laws of the State of Delaware (the "**Company**"), is being issued pursuant to that certain Placement Agency Agreement, dated [], 2023 (the "**Agreement**"), between the Company and Public Ventures, LLC relating to a best efforts public offering (the "**Offering**") of shares of common stock, \$0.0001 par value, of the Company (the "**Common Stock**") pursuant to the Agreement.

FOR VALUE RECEIVED, the Company hereby grants to Public Ventures, LLC and its permitted successors and assigns (collectively, the "**Holder**") the right to purchase from the Company up to [] shares of Common Stock (such shares underlying this Warrant, the "**Warrant Shares**"), at a per share purchase price equal to \$[•] (the "**Exercise Price**"), subject to the terms, conditions and adjustments set forth below in this Warrant.

1. **Date of Warrant Exercise.** This Warrant shall become exercisable one hundred eighty (180) days after the Base Date (the "**Exercise Date**"). As used in this Warrant, the term "**Base Date**" shall mean [], 2023 (the effective date of the registration statement). Except as permitted by applicable rules of the Financial Industry Regulatory Authority, Inc. ("**FINRA**"), this Warrant and the underlying Warrant Shares 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 prior to the date that is one hundred eighty (180) days immediately following the Base Date pursuant to FINRA Rule 5110(e)(1), except as permitted under FINRA Rule 5110(e)(2).

2. **Expiration of Warrant.** This Warrant shall expire on the five (5) year anniversary of the Base Date (the "**Expiration Date**").

3. **Exercise of Warrant.** This Warrant shall be exercisable pursuant to the terms of this Section 3.

3.1 **Manner of Exercise.**

(a) This Warrant may only be exercised by the Holder hereof on or after the Exercise Date and on or prior to the Expiration Date, in accordance with the terms and conditions hereof, in whole or in part (but not as to fractional shares) with respect to any portion of this Warrant, during the Company's normal business hours on any day other than a Saturday or a Sunday or a day on which commercial banking institutions in New York, New York are authorized by law to be closed (a "**Business Day**"), by surrender of this Warrant to the Company at its office maintained pursuant to Section 10.2(a) hereof, accompanied by a written exercise notice in the form attached as **Exhibit A** to this Warrant (or a reasonable facsimile thereof) duly executed by the Holder, together with the payment of the aggregate Exercise Price for the number of Warrant Shares purchased upon exercise of this Warrant. Upon surrender of this Warrant, the Company shall cancel this Warrant document and shall, in the event of partial exercise, replace it with a new Warrant document in accordance with Section 3.3.

(b) Except as provided for in Section 3.1(c) below, each exercise of this Warrant must be accompanied by payment in full of the aggregate Exercise Price in cash by check or wire transfer in immediately available funds for the number of Warrant Shares being purchased by the Holder upon such exercise.

(c) The aggregate Exercise Price for the number of Warrant Shares being purchased may also, in the sole discretion of the Holder, be paid in full or in part on a "cashless basis" at the election of the Holder in the form of Warrant Shares withheld by the Company from the Warrant Shares otherwise to be received upon exercise of this Warrant having an aggregate Fair Market Value on the date of exercise equal to the aggregate Exercise Price of the Warrant Shares being purchased on a "cashless" basis by the Holder.

For purposes of this Warrant, the term "**Fair Market Value**" means with respect to a particular date, the average closing price of the Common Stock for the five (5) trading days immediately preceding the applicable exercise herein as officially reported by the principal securities exchange on which the Common Stock is then listed or admitted to trading, or, if the Common Stock is not listed or admitted to trading on any securities exchange as determined in good faith by resolution of the Board of Directors of the Company, based on the best information available to it.

To illustrate a cashless exercise of this Warrant under Section 3.1 (c)(ii) (or for a portion thereof for which cashless exercise treatment is requested as contemplated by Section 3.1(c)(iii) hereof), the calculation of such exercise shall be as follows:

$$X = Y (A-B)/A$$

where:

X = the number of Warrant Shares to be issued to the Holder (rounded to the nearest whole share).

Y = the number of Warrant Shares with respect to which this Warrant is being exercised.

A = the Fair Market Value of the Common Stock.

B = the Exercise Price.

(d) For purposes of Rule 144 and sub-section (d)(3)(ii) thereof, it is intended, understood, and acknowledged that the Common Stock issuable upon exercise of this Warrant in a cashless exercise transaction as described in Section 3.1(c) above shall be deemed to have been acquired at the time this Warrant was issued. Moreover, it is intended, understood, and acknowledged that the holding period for the Common Stock issuable upon exercise of this Warrant in a cashless exercise transaction as described in Section 3.1(c) above shall be deemed to have commenced on the date this Warrant was issued.

3.2 When Exercise Effective. Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the Business Day on which this Warrant shall have been duly surrendered to the Company, and, at such time, the Holder in whose name any certificate or certificates for Warrant Shares shall be issuable upon exercise as provided in Section 3.3 hereof shall be deemed to have become the holder or holders of record thereof of the number of Warrant Shares purchased upon exercise of this Warrant.

3.3 Delivery of Common Stock Certificates and New Warrant. As soon as reasonably practicable after each exercise of this Warrant, in whole or in part, and in any event within three (3) Business Days thereafter, the Company, at its expense (including the payment by it of any applicable issue taxes), will cause to be issued in the name of and delivered to the Holder hereof or, subject to Sections 9 and 10 hereof, as the Holder (upon payment by the Holder of any applicable transfer taxes) may direct:

(a) a certificate or certificates (with appropriate restrictive legends, as applicable) for the number of duly authorized, validly issued, fully paid and non-assessable Warrant Shares to which the Holder shall be entitled upon exercise; and

(b) in case exercise is in part only, a new Warrant document of like tenor, dated the date hereof, for the remaining number of Warrant Shares issuable upon exercise of this Warrant after giving effect to the partial exercise of this Warrant (including the delivery of any Warrant Shares as payment of the Exercise Price for such partial exercise of this Warrant).

3.4 Beneficial Ownership Limitation. The Company shall not effect any exercise of a Warrant, and the Holder shall not have the right to exercise any portion of a Warrant, pursuant to Section 3 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 (as such term is defined in Rule 405 promulgated under the Securities Act), 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 such 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, non-exercised portion of such Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or non-converted portion of any other securities of the Company (including, without limitation, any other securities of the Company which would entitle the holder thereof to acquire at any time shares of 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, shares of Common Stock ("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 3.4, beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (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 3.4 applies, the determination of whether the Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of the 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 a Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of the 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 3.4, in determining the number of outstanding shares of Common Stock, the 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 Securities and Exchange 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 the Holder, the Company shall within two (2) trading days 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 such 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 the Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 3.4, 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 the Warrant held by the Holder and the provisions of this Section 3.4 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 3.4 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 the Warrant.

4. Certain Adjustments. For so long as this Warrant is outstanding:

4.1 Mergers or Consolidations. If at any time after the date hereof there shall be a capital reorganization (other than a combination or subdivision of Common Stock otherwise provided for herein) resulting in a reclassification to or change in the terms of securities issuable upon exercise of this Warrant (a "Reorganization"), or a merger or consolidation of the Company with another corporation, association, partnership, organization, business, individual, government or political subdivision thereof or a governmental agency (a "Person" or the "Persons") (other than a merger with another Person in which the Company is a continuing corporation and which does not result in any reclassification or change in the terms of securities issuable upon exercise of this Warrant or a merger effected exclusively for the purpose of changing the domicile of the Company) (a "Merger"), then, as a part of such Reorganization or Merger, lawful provision and adjustment shall be made so that the Holder shall thereafter be entitled to receive, upon exercise of this Warrant, the number of shares of stock or any other equity or debt securities or property receivable upon such Reorganization or Merger by a holder of the number of shares of Common Stock which might have been purchased upon exercise of this Warrant immediately prior to such Reorganization or Merger. In any such case, appropriate adjustment shall be made in the application of the provisions of this Warrant with respect to the rights and interests of the Holder after the Reorganization or Merger to the end that the provisions of this Warrant (including adjustment of the Exercise Price then in effect and the number of Warrant Shares) shall be applicable after

that event, as near as reasonably may be, in relation to any shares of stock, securities, property or other assets thereafter deliverable upon exercise of this Warrant. The provisions of this Section 4.1 shall similarly apply to successive Reorganizations and/or Mergers.

4.2 Splits and Subdivisions; Dividends. In the event the Company should at any time or from time to time effectuate a split or subdivision of the outstanding shares of Common Stock or pay a dividend in or make a distribution payable in additional shares of Common Stock or other securities, or rights convertible into, or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock (hereinafter referred to as “**Common Stock Equivalents**”) without payment of any consideration by such holder for the additional shares of Common Stock or Common Stock Equivalents (including the additional shares of Common Stock issuable upon conversion or exercise thereof), then, as of the applicable record date (or the date of such distribution, split or subdivision if no record date is fixed), the per share Exercise Price shall be appropriately decreased and the number of Warrant Shares shall be appropriately increased in proportion to such increase (or potential increase) of outstanding shares; provided, however, that no adjustment shall be made in the event the split, subdivision, dividend or distribution is not effectuated. Notwithstanding the foregoing or anything else to the contrary herein, in no event shall the per share Exercise Price be reduced below the par value of one Common Share or of such other securities as may be issued upon exercise of the Warrant.

4.3 Combination of Shares. If the number of shares of Common Stock outstanding at any time after the date hereof is decreased by a combination of the outstanding shares of Common Stock, the per share Exercise Price shall be appropriately increased and the number of shares of Warrant Shares shall be appropriately decreased in proportion to such decrease in outstanding shares.

4.4 Adjustments for Other Distributions. In the event the Company shall declare a distribution payable in securities of other Persons, evidences of indebtedness issued by the Company or other Persons, assets (excluding cash dividends or distributions to the holders of Common Stock paid out of current or retained earnings and declared by the Company’s Board of Directors) or options or rights not referred to in Sections 4.2 or 4.3 then, in each such case for the purpose of this Section 4.4, upon exercise of this Warrant, the Holder shall be entitled to a proportionate share of any such distribution as though the Holder was the actual record holder of the number of Warrant Shares as of the record date fixed for the determination of the holders of Common Stock of the Company entitled to receive such distribution.

5. No Impairment. The Company will not, by amendment of its certificate of incorporation or by-laws or through any consolidation, merger, reorganization, transfer of assets, 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 of the terms and in the taking of all actions necessary or appropriate in order to protect the rights of the Holder against impairment.

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6. Notice as to Adjustments. With respect to each adjustment pursuant to Section 4 of this Warrant, the Company, at its expense, will promptly compute the adjustment or re-adjustment in accordance with the terms of this Warrant and furnish the Holder with a certificate certified and confirmed by the Secretary or Chief Financial Officer of the Company setting forth, in reasonable detail, the event requiring the adjustment or re-adjustment and the amount of such adjustment or re-adjustment, the method of calculation thereof and the facts upon which the adjustment or re-adjustment is based, and the Exercise Price and the number of Warrant Shares or other securities purchasable hereunder after giving effect to such adjustment or re-adjustment, which report shall be mailed by first class mail, postage prepaid to the Holder.

7. Reservation of Shares. The Company shall, solely for the purpose of effecting the exercise of this Warrant, at all times during the term of this Warrant, reserve and keep available out of its authorized shares of Common Stock, free from all taxes, liens and charges with respect to the issue thereof and not subject to preemptive rights of shareholders of the Company, such number of its shares of Common Stock as shall from time to time be sufficient to effect in full the exercise of this Warrant. If at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect in full the exercise of this Warrant, in addition to such other remedies as shall be available to Holder, the Company will promptly take such corporate action as may, in the opinion of its counsel, be necessary to increase the number of authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including without limitation, using its Reasonable Commercial Efforts (as defined in Section 14 hereof) to obtain the requisite shareholder approval necessary to increase the number of authorized shares of Common Stock. The Company hereby represents and warrants that all shares of Common Stock issuable upon proper exercise of this Warrant shall be duly authorized and, when issued and paid for upon proper exercise, shall be validly issued, fully paid and nonassessable.

8. Registration and Listing.

8.1 Definition of Registrable Securities; Majority. As used herein, the term “**Registrable Securities**” means any shares of Common Stock issuable upon the exercise of this Warrant until the date (if any) on which such shares shall have been transferred or exchanged and new certificates for them not bearing a legend restricting further transfer shall have been delivered by the Company and subsequent disposition of the shares shall not require registration or qualification under the Securities Act or any similar state law then in force. For purposes of this Warrant, the term “**Majority Holders**” shall mean in excess of fifty percent (50%) of the then outstanding Warrant Shares.

8.2 Demand Registration Rights.

(a) The Company, upon written demand (“**Demand Notice**”) of the Majority Holders, agrees to register on one occasion all of the Registrable Securities (a “**Demand Right**”). On such occasion, the Company will file a registration statement or a post-effective amendment to the Registration Statement covering the Registrable Securities within forty-five (45) days after receipt of a Demand Notice and use its Reasonable Commercial Efforts to have such registration statement or post-effective amendment declared effective as soon as possible thereafter; provided, however, that the Company shall not be required to comply with a Demand Notice if the Company has filed a registration statement with respect to which the Holder is entitled to piggyback registration rights pursuant to Section 8.3 hereof and either: (i) the Holder has elected to participate in the offering covered by such registration statement or (ii) if such registration statement relates to an underwritten primary offering of securities of the Company, until the offering covered by such registration statement has been withdrawn or until thirty (30) days after such offering is consummated. The demand for registration may be made at any time during a period of five years beginning three hundred sixty (360) days from the Base Date. The Company covenants and agrees to give written notice of its receipt of any Demand Notice to all other registered Holders of the Warrants and/or the Registrable Securities within ten days from the date of the receipt of any such Demand Notice.

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(b) The Company shall bear all fees and expenses attendant to registering the Registrable Securities pursuant to Section 8.2(a), but the Holders shall pay any and all underwriting commissions and the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities. The Company agrees to use its Reasonable Commercial Efforts to qualify or register the Registrable Securities in such states as are reasonably requested by the Majority Holder(s); provided, however, that in no event shall the Company be required to register the Registrable Securities in a state in which such registration would cause (i) the Company to be obligated to register, license or qualify to do business in such state, submit to general service of process in such state or would subject the Company to taxation as a foreign corporation doing business in such jurisdiction or (ii) the principal stockholders of the Company to be obligated to escrow their shares of capital stock of the Company. The Company shall cause any registration statement or post-effective amendment filed pursuant to the Demand Right granted under Section 8.2(a) to remain effective for a period of nine consecutive months from the effective date of such registration statement or post-effective amendment. The Holders shall only use the prospectuses provided by the Company to sell the Registrable Securities covered by such registration statement, and will immediately cease to use any prospectus furnished by the Company

if the Company advises the Holder that such prospectus may no longer be used due to a material misstatement or omission. Notwithstanding the provisions of this Section 8.2(b), the Holder shall be entitled to a demand registration under this Section on only one (1) occasion and such demand registration right shall terminate on the fifth anniversary of the date of the Underwriting Agreement (as defined below) in accordance with FINRA Rule 5110(g)(8)(C).

8.3 Incidental Registration Rights.

(a) If during the period of seven (7) years after the Base Date, the Company proposes to register any of its securities under the Securities Act (other than in connection with a transaction contemplated by Rule 145(a) promulgated under the Securities Act or pursuant to registration on Form S-4 or S-8 or any successor forms) whether for its own account or for the account of any holder or holders of its shares other than Registrable Securities (any shares of such holder or holders (but not those of the Company and not Registrable Securities) with respect to any registration are referred to herein as, "**Other Shares**"), the Company shall at each such time give prompt (but not less than thirty (30) days prior to the anticipated effectiveness thereof) written notice to the holders of Registrable Securities of its intention to do so. The holders of Registrable Securities shall exercise the "piggy-back" rights provided herein by giving written notice within ten (10) days after the receipt of any such notice (which request shall specify the Registrable Securities intended to be disposed of by such holder). Except as set forth in Section 8.3(b), the Company will use its Reasonable Commercial Efforts to effect the registration under the Securities Act of all of the Registrable Securities which the Company has been so requested to register by such holder, to the extent required to permit the disposition of the Registrable Securities so to be registered, by inclusion of such Registrable Securities in the registration statement which covers the securities which the Company proposes to register. The Company will pay all Registration Expenses in connection with each registration of Registrable Securities pursuant to this Section 8.3.

(b) If the Company at any time proposes to register any of its securities under the Securities Act as contemplated by this Section 8.3 and such securities are to be distributed by or through one or more underwriters, the Company will, if requested by a holder of Registrable Securities, use its Reasonable Commercial Efforts to arrange for such underwriters to include all the Registrable Securities to be offered and sold by such holder among the securities to be distributed by such underwriters, provided that if the managing underwriter of such underwritten offering shall inform the Company by letter of its belief that inclusion in such registration statement and/or distribution of all or a specified number of such securities proposed to be distributed by such underwriters would interfere with the successful marketing of the securities being distributed by such underwriters (such letter to state the basis of such belief and the approximate number of such Registrable Securities, such Other Shares and shares held by the Company proposed so to be registered which may be distributed without such effect), then the Company may, upon written notice to such holder, the other holders of Registrable Securities, and holders of such Other Shares, reduce pro rata in accordance with the number of shares of Common Stock desired to be included in such registration statement and/or distribution (if and to the extent stated by such managing underwriter to be necessary to eliminate such effect) the number of such Registrable Securities and Other Shares the registration and/or distribution of which shall have been requested by each holder thereof so that the resulting aggregate number of such Registrable Securities and Other Shares so included in such registration and/or distribution, together with the number of securities to be included in such registration and/or distribution for the account of the Company, shall be equal to the number of shares stated in such managing underwriter's letter.

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8.4 Registration Procedures. Whenever the holders of Registrable Securities have properly requested that any Registrable Securities be registered pursuant to the terms of this Warrant, the Company shall use its Reasonable Commercial Efforts to effect the registration for the sale of such Registrable Securities in accordance with the intended method of disposition thereof, and pursuant thereto the Company shall as expeditiously as possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its Reasonable Commercial Efforts to cause such registration statement to become effective;

(b) notify such holders of the effectiveness of each registration statement filed hereunder and prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection therewith as may be necessary to (i) keep such registration statement effective and the prospectus included therein usable for a period commencing on the date that such registration statement is initially declared effective by the SEC and ending on the earlier of (A) the date when all Registrable Securities covered by such registration statement have been sold pursuant to the registration statement or cease to be Registrable Securities, or (B) nine months from the effective date of the registration statement; and (ii) comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement during such period in accordance with the intended methods of disposition by the sellers thereof set forth in such registration statement;

(c) [RESERVED];

(d) use its Reasonable Commercial Efforts to register or qualify such Registrable Securities under such other securities or blue sky laws of such jurisdictions as such holders reasonably request and do any and all other acts and things which may be reasonably necessary or advisable to enable such holders to consummate the disposition in such jurisdictions of the Registrable Securities owned by such holders; provided, however, that the Company shall not be required to: (i) qualify generally to do business in any jurisdiction where it would not otherwise be required to qualify but for this subparagraph; (ii) subject itself to taxation in any such jurisdiction; or (iii) consent to general service of process in any such jurisdiction;

(e) notify such holders, at any time when a prospectus relating thereto is required to be delivered under the Securities Act, of the happening of any event as a result of which the prospectus included in such registration statement contains an untrue statement of a material fact or omits any material fact necessary to make the statements therein, in light of the circumstances in which they are made, not materially misleading, and, at the reasonable request of such holders, the Company shall prepare a supplement or amendment to such prospectus so that, as thereafter delivered to the purchasers of such Registrable Securities, such prospectus shall not contain an untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in light of the circumstances in which they are made, not materially misleading;

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(f) provide a transfer agent and registrar for all such Registrable Securities not later than the effective date of such registration statement;

(g) make available for inspection by any underwriter participating in any disposition pursuant to such registration statement, and any attorney, accountant or other agent retained by any such underwriter, all financial and other records, pertinent corporate documents and properties of the Company, and cause the Company's officers, directors, managers, employees and independent accountants to supply all information reasonably requested by any such underwriter, attorney, accountant or agent in connection with such registration statement;

(h) otherwise comply with all applicable rules and regulations of the SEC, and make available to its security holders, as soon as reasonably practicable, an earnings statement of the Company, which earnings statement shall satisfy the provisions of Section 11(a) of the Securities Act and, at the option of the Company, Rule 158 thereunder;

(i) in the event of the issuance of any stop order suspending the effectiveness of a registration statement, or of any order suspending or preventing the use of any related prospectus or suspending the qualification of any Registrable Securities included in such registration statement for sale in any jurisdiction, the Company shall use its Reasonable Commercial Efforts promptly to obtain the withdrawal of such order; and

(j) if the offering is underwritten, use its Reasonable Commercial Efforts to furnish on the date that Registrable Securities are delivered to the underwriters for sale pursuant to such registration, an opinion dated such date of counsel representing the Company for the purposes of such registration, addressed to the underwriters covering such issues as are customarily addressed in opinions to underwriters in public offerings and reasonably required by such underwriters.

8.5 Listing. The Company shall secure the listing of the Common Stock underlying this Warrant upon each national securities exchange or automated quotation system upon which shares of Common Stock are then listed or quoted (subject to official notice of issuance) and shall maintain such listing of shares of Common Stock. The Company shall at all times comply in all material respects with the Company's reporting, filing and other obligations under the by-laws or rules of The NASDAQ Stock Market (or such other national securities exchange or market on which the Common Stock may then be listed, as applicable).

8.6 Expenses. The Company shall pay all Registration Expenses relating to the registration and listing obligations set forth in this Section 8. For purposes of this Warrant, the term "**Registration Expenses**" means: (a) all registration, filing and FINRA fees, (b) all reasonable fees and expenses of complying with securities or blue sky laws, (c) all word processing, duplicating and printing expenses, (d) the fees and disbursements of counsel for the Company and of its independent public accountants, including the expenses of any special audits or "cold comfort" letters required by or incident to such performance and compliance, and (e) fees and disbursements of one counsel for the selling holders of Registrable Securities up to \$5,000. Registration Expenses shall not include any underwriting discounts and commissions which may be incurred in the sale of any Registrable Securities and transfer taxes of the selling holders of Registrable Securities.

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8.7 Information Provided by Holders. Any holder of Registrable Securities included in any registration shall furnish to the Company such information as the Company may reasonably request in writing, including, but not limited to, a completed and executed questionnaire requesting information customarily sought of selling security holders, to enable the Company to comply with the provisions hereof in connection with any registration referred to in this Warrant. The Holder agrees to suspend all sales of Registrable Securities pursuant to a registration statement filed under Section 8.3 in the event the Company notifies Holder pursuant to Section 8.4(e) that the prospectus relating thereto is no longer current and will not resume sales under such registration statement until advised by the Company that the prospectus has been appropriately supplemented or amended.

8.8 Net Cash Settlement. Notwithstanding anything herein to the contrary, in no event will the Holder hereof be entitled to receive a net-cash settlement as liquidated damages in lieu of physical settlement in shares of Common Stock, regardless of whether the Common Stock underlying this Warrant is registered pursuant to an effective registration statement; provided, however, that the foregoing will not preclude the Holder from seeking other remedies at law or equity for breaches by the Company of its registration obligations hereunder.

9. Restrictions on Transfer.

9.1 Restrictive Legends. This Warrant and each Warrant issued upon transfer or in substitution for this Warrant pursuant to Section 10 hereof, each certificate for Common Stock issued upon the exercise of the Warrant and each certificate issued upon the transfer of any such Common Stock shall be transferable only upon satisfaction of the conditions specified in this Section 9. Each of the foregoing securities shall be stamped or otherwise imprinted with a legend reflecting the restrictions on transfer set forth herein and any restrictions required under the Securities Act or other applicable securities laws.

9.2 Notice of Proposed Transfer. Prior to any transfer of any securities which are not registered under an effective registration statement under the Securities Act ("**Restricted Securities**"), which transfer may only occur if there is an exemption from the registration provisions of the Securities Act and all other applicable securities laws, the Holder will give written notice to the Company of the Holder's intention to effect a transfer (and shall describe the manner and circumstances of the proposed transfer). The following provisions shall apply to any proposed transfer of Restricted Securities:

(i) If in the opinion of counsel for the Holder reasonably satisfactory to the Company the proposed transfer may be effected without registration of the Restricted Securities under the Securities Act (which opinion shall state in detail the basis of the legal conclusions reached therein), the Holder shall thereupon be entitled to transfer the Restricted Securities in accordance with the terms of the notice delivered by the Holder to the Company. Each certificate representing the Restricted Securities issued upon or in connection with any transfer shall bear the restrictive legends required by Section 9.1 hereof.

(ii) If the opinion called for in (i) above is not delivered, the Holder shall not be entitled to transfer the Restricted Securities until either: (x) receipt by the Company of a further notice from such Holder pursuant to the foregoing provisions of this Section 9.2 and fulfillment of the provisions of clause (i) above, or (y) such Restricted Securities have been effectively registered under the Securities Act.

9.3 Certain Other Transfer Restrictions. Notwithstanding any other provision of this Warrant: (i) prior to the Exercise Date, this Warrant or the Restricted Securities thereunder may only be transferred or assigned to the persons permitted under FINRA Rule 5110(g), and (ii) subject at all times to FINRA Rule 5110(g), no opinion of counsel shall be necessary for a transfer of Restricted Securities by the holder thereof to any Person employed by or owning equity in the Holder, if the transferee agrees in writing to be subject to the terms hereof to the same extent as if the transferee were the original purchaser hereof and such transfer is permitted under applicable securities laws.

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9.4 Termination of Restrictions. Except as set forth in Section 9.3 hereof and subject at all times to FINRA Rule 5110(g), the restrictions imposed by this Section 9 upon the transferability of Restricted Securities shall cease and terminate as to any particular Restricted Securities: (a) which shall have been effectively registered under the Securities Act, or (b) when, in the opinion of counsel for the Company, such restrictions are no longer required in order to insure compliance with the Securities Act or Section 10 hereof. Whenever such restrictions shall cease and terminate as to any Restricted Securities, the Holder thereof shall be entitled to receive from the Company, without expense (other than applicable transfer taxes, if any), new securities of like tenor not bearing the applicable legends required by Section 9.1 hereof.

10. Ownership, Transfer, Sale and Substitution of Warrant

10.1 Ownership of Warrant. The Company may treat any Person in whose name this Warrant is registered in the Warrant Register maintained pursuant to Section 10.2(b) hereof as the owner and holder thereof for all purposes, notwithstanding any notice to the contrary, except that, if and when any Warrant is properly assigned in blank, the Company may (but shall not be obligated to) treat the bearer thereof as the owner of such Warrant for all purposes, notwithstanding any notice to the contrary. Subject to Sections 9 and 10 hereof, this Warrant, if properly assigned, may be exercised by a new holder without a new Warrant first having been issued.

10.2 Office; Exchange of Warrant

(a) The Company will maintain its principal office at the location identified in the prospectus relating to the Offering or at such other offices as set forth in the Company's most current filing (as of the date notice is to be given) under the Securities Exchange Act of 1934, as amended, or as the Company otherwise notifies the Holder.

(b) The Company shall cause to be kept at its office maintained pursuant to Section 10.2(a) hereof a Warrant Register for the registration and transfer of the Warrant. The name and address of the holder of the Warrant, the transfers thereof and the name and address of the transferee of the Warrant shall be registered in such Warrant Register. The Person in whose name the Warrant shall be so registered shall be deemed and treated as the owner and holder thereof for all purposes of this Warrant, and the Company shall not be affected by any notice or knowledge to the contrary.

(c) Upon the surrender of this Warrant, properly endorsed, for registration of transfer or for exchange at the office of the Company maintained pursuant to Section 10.2(a) hereof, the Company at its expense will (subject to compliance with Section 9 hereof, if applicable) execute and deliver to or upon the order of the Holder thereof a new Warrant of like tenor, in the name of such holder or as such holder (upon payment by such holder of any applicable transfer taxes) may direct, calling in the aggregate on the face thereof for the number of shares of Common Stock called for on the face of the Warrant so surrendered (after giving effect to any previous adjustment(s) to the number of Warrant Shares).

10.3 Replacement of Warrant. Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of any such loss, theft or destruction of this Warrant, upon delivery of indemnity reasonably satisfactory to the Company in form and amount or, in the case of any mutilation, upon surrender of this Warrant for cancellation at the office of the Company maintained pursuant to Section 10.2(a) hereof, the Company will execute and deliver, in lieu thereof, a new Warrant of like tenor and dated the date hereof.

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10.4 Opinions. In connection with the sale of the Warrant Shares by Holder, if the Company's counsel reasonably determines such opinion is appropriate, the Company agrees to cooperate with the Holder, and at the Company's expense, to have its counsel provide any legal opinions required to remove the restrictive legends from the Warrant Shares in connection with a sale, transfer or legend removal request of Holder.

11. No Rights or Liabilities as Stockholder. No Holder shall be entitled to vote or receive dividends or distributions or be deemed the holder of any equity securities which may at any time be issuable on the exercise hereof, nor shall anything contained herein be construed to confer upon the Holder, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value, consolidation, merger, conveyance, or otherwise) or to receive notice of meetings, or to receive dividends or distributions, or to share in the assets of the Company in the event of a liquidation, dissolution or the winding up of the Company, until the Warrant shall have been exercised and the shares of Common Stock purchasable upon the exercise hereof shall have become deliverable, as provided herein.

12. Notices. Any notice or other communication in connection with this Warrant shall be given in writing and directed to the parties hereto as follows: (a) if to the Holder, at the address of the holder in the warrant register maintained pursuant to Section 10 hereof, or (b) if to the Company, to the attention of its Chief Executive Officer at its office maintained pursuant to Section 10.2(a) hereof; *provided*, that the exercise of the Warrant shall also be effected in the manner provided in Section 3 hereof. Notices shall be deemed properly delivered and received when delivered to the notice party (i) if personally delivered, upon receipt or refusal to accept delivery, (ii) if sent via facsimile, upon mechanical confirmation of successful transmission thereof generated by the sending telecopy machine, (iii) if sent by a commercial overnight courier for delivery on the next Business Day, on the first Business Day after deposit with such courier service, or (iv) if sent by registered or certified mail, five (5) Business Days after deposit thereof in the U.S. mail.

13. Payment of Taxes. The Company will pay all documentary stamp taxes attributable to the issuance of shares of Common Stock underlying this Warrant upon exercise of this Warrant; *provided, however*; that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the transfer or registration of this Warrant or any certificate for shares of Common Stock underlying this Warrant in a name other than that of the Holder. The Holder is responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving shares of Common Stock underlying this Warrant upon exercise hereof.

14. Miscellaneous. This Warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of the change, waiver, discharge or termination is sought. This Warrant shall be construed and enforced in accordance with and governed by the laws of the State of New York. Each of the parties consents to the exclusive jurisdiction of the Federal or state courts whose districts encompass any part of the County of New York located in the City of New York, New York in connection with any dispute arising under this Agreement and hereby waives, to the maximum extent permitted by law, any objection, including any objection based on *forum non conveniens*, to the bringing of any such proceeding in such jurisdictions. Each party to this Agreement irrevocably consents to the service of process in any such proceeding by any manner permitted by law. The section headings in this Warrant are for purposes of convenience only and shall not constitute a part hereof. When used herein, the term "**Reasonable Commercial Efforts**" means, with respect to the applicable obligation of the Company, reasonable commercial efforts for similarly situated, publicly-traded companies.

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IN WITNESS WHEREOF, the Company has caused this Placement Agent Warrant to be duly executed as of the date first above written.

HEARTBEAM, INC.

By: _____

Name:

Title:

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EXHIBIT A
FORM OF EXERCISE NOTICE
[To be executed only upon exercise of Warrant]

To HEARTBEAM, INC.:

The undersigned registered holder of the within Warrant hereby irrevocably exercises the Warrant pursuant to Section 3.1 of the Warrant with respect to [_____] Warrant Shares, at an exercise price of \$[_____] per share, and requests that the certificates for such Warrant Shares be issued, subject to Sections 9 and 10, in the name of and delivered to:

The undersigned is hereby making payment for the Warrant Shares in the following manner:
[check one]

- by cash in accordance with Section 3.1(b) of the Warrant
- via cashless exercise in accordance with Section 3.1(c) of the Warrant in the following manner:

The undersigned hereby represents and warrants that it is, and has been since its acquisition of the Warrant, the record and beneficial owner of the Warrant.

Dated:

Print or Type Name

(Signature must conform in all respects to name of holder as specified on the face of Warrant)
(Street Address)

(City) (State) (Zip Code)

**EXHIBIT B
FORM OF ASSIGNMENT**

[To be executed only upon transfer of Warrant]

For value received, the undersigned registered holder of the within Warrant hereby sells, assigns and transfers unto _____ [include name and addresses] the rights represented by the Warrant to purchase _____ shares of Common Stock of HEARTBEAM, INC. to which the Warrant relates, and appoints _____ Attorney to make such transfer on the books of HEARTBEAM, INC. maintained for the purpose, with full power of substitution in the premises.

Dated:

(Signature must conform in all respects to name of holder as specified on the face of Warrant)

(Street Address)

(City) (State) (Zip Code)

Signed in the presence of:

(Signature of Transferee)

(Street Address)

(City) (State) (Zip Code)

Signed in the presence of:

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of HeartBeam Inc. on Amendment No. 2 to Form S-1 (File No. 333-269717) of our report dated March 16, 2023, which includes an explanatory paragraph as to the Company's ability to continue as a going concern, with respect to our audit of the financial statements of HeartBeam Inc. as of and for the year ended December 31, 2022 appearing in the Annual Report on Form 10-K of HeartBeam, Inc. for the year ended December 31, 2022. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ Marcum llp

Marcum llp
East Hanover, NJ
April 17, 2023

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Amendment No. 2 on Form S-1 of our report dated March 24, 2022, with respect to our audit of the financial statements of the Company as of and for the year ended December 31, 2021. We also consent to the reference to our firm under the heading “Experts” in this Registration Statement. We were dismissed as auditors on September 19, 2022 and, accordingly, we have not performed any audit or review procedures with respect to any financial statements incorporated by reference for the periods after the date of our dismissal.

/s/ Friedman LLP

East Hanover, NJ
April 17, 2023