UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO**

Commission File Number: 001-38740

Vapotherm, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**46-2259298**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
100 Domain Drive Exeter, NH	**03833**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (603) 658-0011

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.001 per value per share	VAPO	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☐ NO ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES ☒ NO ☐

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.

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). YES ☐ NO ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, based on the closing price of the shares of common stock on The New York Stock Exchange on June 30, 2021, was $543.1 million. The number of shares of registrant's Common Stock outstanding as of February 18, 2022, was 26,184,632.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Definitive Proxy Statement relating to the Annual Meeting of Stockholders, scheduled to occur on June 21, 2022, are incorporated by reference into Part III of this report.

Table of Contents

We use "Vapotherm," "Vapotherm Access," "High Velocity Therapy," "HVT," "Precision Flow," "Hi-VNI," "OAM," "HGE," "Solus Medical," and other marks as trademarks in the United States and/or in other countries. This Annual Report on Form 10-K contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this Annual Report on Form 10-K, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

Unless otherwise indicated, information contained in this Annual Report on Form 10-K concerning our industry and the markets in which we operate, including our general expectations, market position and market opportunity, is based on our management's estimates and research, as well as industry and general publications and research, surveys and studies conducted by third parties. We believe that the information from these third-party publications, research, surveys and studies included in this Annual Report on Form 10-K is reliable. Management's estimates are derived from publicly available information, their knowledge of our industry and their assumptions based on such information and knowledge, which we believe to be reasonable. This data involves a number of assumptions and limitations which are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in Part I, "Item 1A. Risk Factors."

Unless the context requires otherwise, references to "Vapotherm," the "Company," "we," "us," and "our," refer to Vapotherm, Inc. and our consolidated subsidiaries.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts contained in this Annual Report on Form 10-K are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words and the use of future dates. Forward-looking statements include, but are not limited to, statements concerning:

- estimates regarding the annual total addressable market for our High Velocity Therapy systems and other products and services, future results of operations, financial position, capital requirements and our needs for additional financing;
- commercial success and market acceptance of our High Velocity Therapy systems, our Oxygen Assist Module, our Vapotherm Access (formerly known as HGE Digital Health) applications and offerings, and any future products we may seek to commercialize;
- the commercial and clinical success of our strategy to create a respiratory care "ecosystem," including our affiliation with RespirCare and other potential participants, and our ability to execute this strategy;
- our ability to enhance our High Velocity Therapy technology, our Oxygen Assist Module, and our Vapotherm Access applications and offerings to expand our indications and to develop and commercialize additional products and services;
- our business model and strategic plans for our products, technologies and business, including our implementation thereof;
- the impact of the current COVID-19 pandemic and labor and hospital staffing shortages on our business and operating results;
- our ability to accurately forecast customer demand for our products, adjust our production capacity if necessary and manage our inventory, particularly in light of the ongoing COVID-19 pandemic and current global supply chain disruptions;
- our ability to expand, manage and maintain our direct sales and marketing organizations in the United States, Germany, the United Kingdom and any other jurisdiction in which we elect to pursue a direct sales model , and to market and sell our High Velocity Therapy systems globally and to market and sell our Oxygen Assist Module in the United States and throughout the world;
- our ability to hire and retain our senior management and other highly qualified personnel;
- our ability to obtain additional financing in the future;
- our ability to commercialize or obtain regulatory approvals for our products, or the effect of delays in commercializing or obtaining regulatory approvals;
- U.S. Food and Drug Administration or other United States or foreign regulatory actions affecting us or the healthcare industry generally, including healthcare reform measures in the United States and international markets;
- the timing or likelihood of regulatory filings and approvals;
- our ability to establish, maintain, and use our intellectual property to protect our High Velocity Therapy technology, Oxygen Assist Module, and Vapotherm Access applications and offerings, and to prevent infringement of our intellectual property and avoid third party infringement claims;
- the volatility of the trading price of our common stock; and
- our expectations about market trends and their anticipated effect on our business and operating results.

The forward-looking statements in this Annual Report on Form 10-K are only predictions and are based largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this Annual Report on Form 10-K and are subject to a number of known and unknown risks, uncertainties and assumptions, including those described in this Annual Report on Form 10-K in Part I, "Item 1A. Risk Factors" and Part II, "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and in our other filings with the Securities and Exchange Commission, or SEC. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. Any forward-looking statements made herein speak only as of the date of this Annual Report on Form 10-K, and you should not rely on forward-looking statements as predictions of future events. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

PART I

Item 1. Business.

Overview

We are a global medical technology company focused on the care of patients of all ages suffering from the respiratory distress often associated with complex lung diseases such as chronic obstructive pulmonary disease ("COPD"), congestive heart failure ("CHF"), pneumonia, asthma and COVID-19. Our strategy is to become the world's preeminent complex lung disease patient management company by combining digital, clinical and device solutions to create a healthcare ecosystem focused on improving the lives of complex lung disease patients while reducing the cost of their care. Our device solutions are focused on High Velocity Nasal Insufflation ("HVNI", or "High Velocity Therapy"), which delivers non-invasive ventilatory support to patients by providing heated, humidified, oxygenated air at high velocities through a small-bore nasal interface, and on closed loop control systems such as our Oxygen Assist Module, designed to automatically maintain SPO2 levels within a specified range for a defined period of time. Our digital solutions are focused on at home patient monitoring, using proprietary algorithms to predict impending respiratory episodes before they occur and coordinate timely intervention, obviating the need for costly hospital admissions and minimizing patient distress. Our clinical solutions include affiliations with leading pulmonologists and other clinicians, offering both in person and virtual care, as well as our own call center staffed by experienced nurses. While these device, digital and clinical solutions function independently, we believe leveraging the three together can create a unique healthcare ecosystem, focused on delivering high quality, efficient respiratory care.

High Velocity Therapy is an advanced form of high flow therapy that is differentiated due to its ability to deliver breathing gases, including oxygen, at a high velocity, for the treatment of spontaneously breathing patients with either Type 1 hypoxic respiratory distress, like that experienced by patients with pneumonia or COVID-19, or Type 2 hypercapnic respiratory distress, like that experienced by patients with COPD. Our Precision Flow systems, which use High Velocity Therapy technology, are clinically validated alternatives to, and address many limitations of, the current standard of care for the treatment of respiratory distress in a hospital setting. Our next generation High Velocity Therapy system, known as HVT 2.0, received 510k clearance from the Food and Drug Administration ("FDA") in 2021 and is currently in limited market release. The HVT 2.0 platform is approved for therapy in multiple settings of care, including the home. As of December 31, 2021, more than 3.3 million patients have been treated with our Precision Flow systems, and we have a global installed base of over 35,200 units, an increase of 22.9% compared to December 31, 2020, and an increase of 112.0 % compared to December 31, 2019.

Our business was significantly transformed during 2020 due to increased demand for our High Velocity Therapy technology for treatment of COVID-19 patients, as evidenced by year over year revenue growth of 161.4% from 2019 to 2020, and a 53.5% compounded annual revenue growth rate from 2019 to 2021. The COVID-19 pandemic contributed to this transformation in at least two primary ways: first, it resulted in increased awareness of the unique efficacy of our High Velocity Therapy for the treatment of COVID-19 patients, and generally, resulting in high global demand for our technology and the concomitant rapid growth of our installed base referred to above. Today, our brand is a recognized and respected name in an ever-increasing number of hospitals around the world. Second, many respiratory distress patients who require ventilatory support are initially treated in a hospital's emergency department ("ED") with the goal of stabilizing these patients with a non-invasive ventilation therapy so their underlying condition can be treated. Our focus on hospital emergency departments as an effective entry point for our products resulted in our systems being in the right place at the right time when the COVID-19 pandemic hit. This exposed a significant number of new physicians to the efficacy of our High Velocity Therapy technology, especially as they were able to see patients moved out of the emergency room and into lower acuity settings in the hospital after receiving our High Velocity Therapy. We expect that increased awareness among physicians of the efficacy of our High Velocity Therapy to treat respiratory distress will result in expanded use of our products to treat all forms of Type 1 and Type 2 respiratory distress in a variety of settings.

Patients with both Type 1 and Type 2 respiratory distress can have severe difficulty breathing and inability to sustain sufficient oxygen levels or remove retained carbon dioxide in their lungs and airways. These patients often require immediate respiratory support ranging from supplemental oxygen therapy for mild cases to invasive mechanical ventilators for severe cases. Many of these patients are initially treated in the emergency department. Patients who cannot be adequately stabilized are often transferred to the intensive care unit, or ICU, a high cost and capacity-constrained setting in the hospital. An independent third-party study published in the June 2005 issue of *Critical Care Medicine* determined that the average cost for a typical three day stay in the ICU in the United States was $13,347. This cost increased by an average of 47% to $19,558 when the patient required mechanical ventilation. To the extent our products are able to reduce the number of patients requiring transfer to the ICU, these treatment costs can be reduced.

The market for the treatment of respiratory distress is large and growing. Based on industry sources, we estimate that there are over 12 million patients who suffer from respiratory distress each year in the United States and select international markets that could benefit from our High Velocity Therapy technology. As a result, we believe the annual total addressable global market for our High Velocity Therapy technology exceeds $1.5 billion. We believe that an aging population and growing prevalence of heart failure and COPD will lead to an increase in the size of our total addressable market in the future. Additionally, if, as many believe, COVID-19 is now an annual, endemic respiratory illness that will recur in various mutations around the world, the size of our total addressable market already has increased.

Our High Velocity Therapy technology competes with non-invasive positive pressure ventilation, or NiPPV, the traditional standard of care for respiratory distress. NiPPV uses pressure to drive gas in and out of a patient's lungs. It is typically administered through the fitting of an air-tight mask over the patient's nose and mouth and tightening a strap around the patient's head to secure the mask in place. NiPPV delivered through a mask is associated with increased patient discomfort and anxiety and can cause facial skin ulceration and trauma to the lungs. The mask complicates the care required to support a patient because they cannot talk, eat, drink or take oral medications while wearing the tight-fitting mask, and must time their breaths to be in sync with the bursts of air being forced into their lungs. NiPPV can also be delivered through a tight-fitting mask that only covers the nose or tight-fitting prongs that seal the external opening of each nostril. These alternatives, which usually require a chin strap to limit air leaks by keeping the patient's mouth closed, can also cause skin ulceration around the nose and nostrils. Third-party clinical evidence published in the June 2000, January 2009 and February 2013 issues of *Critical Care Medicine* suggests that delivering NiPPV through a mask that covers both the nose and mouth is generally preferred from an effectiveness perspective over a mask that only covers the nose or nasal prongs, particularly in the acute setting.

NiPPV is typically an escalation therapy, which means that practitioners often start at low pressures and increase as tolerated until the patient stabilizes. Patients treated with NiPPV are often transferred to the ICU due to the high level of patient monitoring required. Clinical evidence published in the November 2007 issue of *Respiratory Care* shows that approximately 30% of patients are intolerant of NiPPV masks, which can cause them to become non-compliant with treatment. Patients who cannot tolerate NiPPV are often sedated and potentially intubated in preparation for mechanical ventilation. Intubation involves the insertion of a plastic tube into the trachea to maintain an open airway. Mechanical ventilation is a complex, invasive procedure that is associated with increased costs of care, lengths of stay, incidence of infections, ventilator dependence and mortality.

In contrast to NiPPV, our High Velocity Therapy technology delivers heated, humidified and oxygenated air at a high velocity to patients through a comfortable small-bore nasal interface to help reduce the work of breathing. Our Precision Flow systems, are clinically validated alternatives to NiPPV, and we believe they also provide the following primary benefits for the patient, the clinician and the hospital:

- meaningful improvement in patient comfort and compliance;
- facilitation of patient admissions to lower intensity, lower cost and less capacity-constrained care settings;
- reduced risk of pressure ventilation related side effects; and
- clinician workflow benefits, including easier administration and reduced patient monitoring.

A compelling body of clinical data supports the efficacy and benefits of High Velocity Therapy technology for respiratory distress. In 2018, the FDA, granted our *de novo* request for an expanded indication for the Precision Flow Hi-VNI system, which incorporates our High Velocity Therapy technology. The expanded indication was based on compelling clinical evidence and currently identifies this system as a high velocity nasal insufflation device that provides ventilatory support to spontaneously breathing patients suffering from respiratory distress in a hospital setting. The FDA also created a new classification, known as QAV, under which this system is currently the only product listed. We believe this expanded QAV indication, which encompasses actual ventilatory support in the indicated circumstances, clinically differentiates our system from other "high flow" systems, which are not indicated for the provision of ventilatory support and validates High Velocity Therapy as an attractive alternative to NiPPV. We are presently in the process of obtaining the QAV designation for our next generation HVT 2.0 platform, which we expect to receive from the FDA in 2022. Our goal is for our High Velocity Therapy products to become the standard of care for the treatment of respiratory distress in the hospital, in the home, and during EMS transport.

In certain countries outside the United States, we currently offer our Oxygen Assist Module, or OAM, which launched in the United Kingdom, select European markets, and Israel in late 2020. The Oxygen Assist Module can be used with most versions of our Precision Flow system as well as the HVT 2.0. The Oxygen Assist Module helps clinicians maintain a patient's pulse oxygen saturation, or SpO2, within a target SpO2 range over a greater period of time while requiring

significantly fewer manual adjustments to the equipment. Maintenance of the prescribed oxygen saturation range may reduce the health risks associated with dosing too much, or too little, oxygen, particularly in neonates. In neonates, these risks include visual or developmental impairment or death.

We sell our Precision Flow systems to hospitals through a direct sales organization in the United States, the United Kingdom and Germany and through distributors in other select countries outside of those countries. Our Oxygen Assist Module is sold through a direct sales organization in the United Kingdom and Germany and through distributors in Europe and the Middle East. We are in the process of seeking FDA approval to market the Oxygen Assist Module in the United States. In addition, we employ field-based clinical educators who focus on medical education and training in the effective use of our products and help facilitate increased adoption and utilization. We focus on physicians, respiratory therapists and nurses who work in acute hospital settings, including the ED and adult, pediatric and neonatal ICUs. Our relationship with these clinicians is particularly important, as it enables our products to follow patients through the care continuum. As of December 31, 2021, we have sold our Precision Flow systems to over 2,200 hospitals across the United States, and in over 40 countries outside of the United States.

Presently, our revenues are derived principally from sales of Precision Flow systems and sales of the single-use disposable vapor transfer cartridges these systems require. We also derive revenue from ancillary products and services related to our Precision Flow systems. Due to demand for our High Velocity Therapy technology during the COVID-19 pandemic, in 2020 we generated revenue primarily from sales of our Precision Flow systems. However, historically we have generated revenue primarily from sales of the disposable products utilized with our Precision Flow systems, and in the future, we believe we will generate revenue primarily from the sales of disposable products utilized with our systems. Our revenue grew from $48.1 million for the year ended December 31, 2019 to $113.3 million for the year ended December 31, 2021. Revenue from single-use disposables represented approximately 45.1% and 58.8% of our total revenue for the years ended December 31, 2020 and December 31, 2021, respectively, and increased 17.5% on a year over year basis. During this time, our international revenue also grew, representing 21.1% of our total revenue in 2020 and 25.7% of our total revenue in 2021. For the years ended December 31, 2019, 2020 and 2021, we incurred net losses of $51.1 million, $51.5 million, and $59.8 million, respectively.

We believe our anticipated growth will be driven by the following strengths: disruptive High Velocity Therapy technology supported by a compelling body of clinical and economic evidence; the expanded FDA indications we received for our next generation HVT 2.0 platform, enabling use in multiple settings of care; deep expertise in the area of closed loop control, machine learning based respiratory technology, the first example of which is our Oxygen Assist Module; new FDA clearances and/or approvals for our product pipeline, including the Oxygen Assist Module; a recurring revenue model with high visibility on our disposables utilization across a robust global installed base; an expanding digital and clinical footprint we expect will accelerate our strategy to become the world's preeminent complex lung disease patient management company; dedicated respiratory sales forces in the United States, the United Kingdom and Germany, which we expect to extend to other growing international markets; experienced international distributors; a comprehensive approach to market development with established clinical and digital marketing teams; a robust and growing intellectual property portfolio; and an experienced senior management team and board members with deep industry practice.

In late 2020, we acquired HGE Health Care Solutions, LLC ("HGE") a company which created a digital disease management solution for ongoing management of chronic respiratory disease. HGE developed a clinical services platform designed to help providers, payors and hospitals improve the quality of life of their COPD patients and reduce their cost of care by remotely monitoring their daily condition and responding early to changes that could signal an impending worsening of their COPD condition (known as an "exacerbation"). COPD exacerbations often result in emergency room visits and hospital admissions. HGE's platform was built based on clinical protocols and supported by 12 years of research focused on finding a better way to provide care for a geographically and socio-economically diverse COPD patient population.

Unlike other disease management solutions, HGE effectively engages both patients and providers on a daily basis. A patient's symptoms are typically logged daily via a mobile application, quickly establishing a baseline. From there, HGE's intelligent platform enables clinicians to triage and respond to patients in need with same-day treatment plans that address current symptoms and seek to prevent impending exacerbations.

In mid-2021, we re-branded HGE as Vapotherm Access and launched "Vapotherm Access – Post Care" to hospitals, a program dedicated to reducing 30-day readmissions of recently discharged COPD patients. We also launched "Vapotherm Access – 365" to hospitals, providers and payors, extending the 30 days of post care to full year patient monitoring. As part of this initiative, we established a small direct sales force focused exclusively on Vapotherm Access- Post Care and Vapotherm Access – 365. We believe our Vapotherm Access platform can be adapted to address other respiratory

conditions and will help us achieve the goal of making our High Velocity Therapy products the standard of care in a variety of clinical settings.

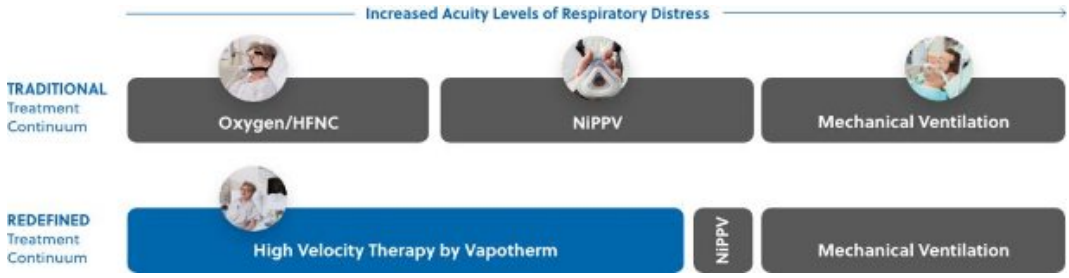
Our strategy includes: attracting new customers while driving penetration within our existing customer base, with a specific focus on educating those customers who first utilized our technology to treat the Type 1 respiratory distress experienced by COVID-19 patients on the efficacy of our High Velocity Therapy technology at also treating Type 2 respiratory distress such as COPD ; continuing to build a preeminent respiratory sales team to facilitate further adoption; increasing awareness of our solutions through social media, digital marketing, and medical education programs; continuing to drive manufacturing cost efficiencies and leveraging our infrastructure to expand margins; leveraging our innovation capabilities to expand our High Velocity Therapy and Oxygen Assist Module technologies; scaling our Vapotherm Access service offerings and integrating them with our other solutions; and expanding the range of respiratory conditions for which the Vapotherm Access platform can be utilized.

In late 2021, we affiliated with a leading pulmonology practice in Tulsa, Oklahoma known as Pulmonary Care Innovations, PLLC d/b/a RespirCare ("RespirCare"). RespirCare provides in-person and virtual care to COPD and other respiratory distress patients in Oklahoma (and potentially other states with licensure reciprocity). This affiliation was structured as an acquisition of RespirCare's management company, PCI Management Group LLC ("PCI") and PCI's arrangements with RespirCare and its physician shareholder. Our affiliation with RespirCare is an important element of our strategy to become the world's preeminent complex lung disease patient management company. Operating within established legal safe harbors and applicable regulatory requirements, we may in the future enter into similar arrangements with other participants in the complex lung disease continuum of care.

Overview of High Velocity Therapy Technology

High Velocity Therapy technology delivers heated, humidified and oxygenated air at a high velocity through a small-bore nasal interface to treat patients of all ages suffering from respiratory distress. Our Precision Flow systems, which use High Velocity Therapy technology, can treat nearly all patients in respiratory distress who would not otherwise require mechanical ventilation, regardless of whether they are in need of an oxygen-based therapy or NiPPV. There is a subset of patients who will require NiPPV that we might otherwise have been able to treat, but for their absence of a respiratory drive, or the inability to breathe on their own.

Patient groups that can be treated with High Velocity Therapy. These include patients suffering from a wide range of respiratory distress acuity levels, including most of those traditionally treated by NiPPV.

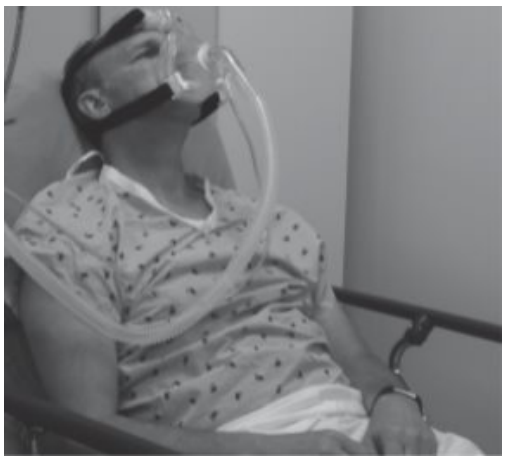


Instead of a mask, High Velocity Therapy technology delivers temperature-controlled humidified gas to the patient at a high velocity through a small-bore nasal interface. High Velocity Therapy is typically a de-escalation therapy, which means it is appropriate to start at higher flows. Breathing while on High Velocity Therapy technology helps patients ventilate and return to their normal breathing pattern. In comparison to NiPPV, we believe that our technology improves patient comfort and compliance due to the delivery of breathing gases through a small-bore nasal interface that does not completely cover the patient's nose and mouth. While using our High Velocity Therapy products, patients can eat and drink, talk with their caregivers and loved ones, and in some cases where important to the patient's rehabilitation, remain ambulatory. For parents with infants in the neonatal intensive care unit, or NICU, our products allow more direct skin-to-skin contact between parents

and their babies which has been shown to improve cardiorespiratory and temperature stability, sleep organization and duration of quiet sleep, neurodevelopmental outcomes, breastfeeding and modulation of pain responses in published clinical literature.

High Velocity Therapy

NiPPV

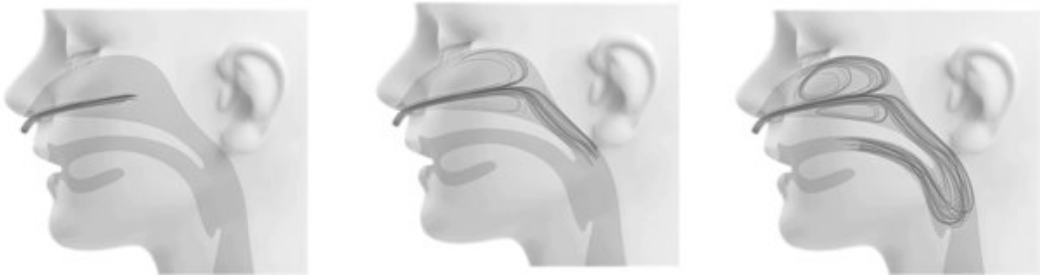


High Velocity Therapy Mechanism of Action

The key to High Velocity Therapy technology is the ability to deliver conditioned breathing gases to patients in respiratory distress at a sufficient velocity to flush out the anatomical dead space between breaths when the patient's respiratory rate is elevated. As patients inhale this properly humidified, oxygen rich and carbon dioxide depleted medical gas, the work of breathing is reduced. Similar to the effect seen with water flowing from a garden hose, narrowing of the opening leads to dramatic increases in water velocity and turbulent kinetic energy exiting the hose or, in the case of High Velocity Therapy technology, air exiting the cannula. The Precision Flow systems' high-velocity delivery of breathing gases through a small-bore adult cannula results in an approximately four-fold increase in velocity as compared to the same flow from the large-bore adult cannula of conventional heated humidified high flow oxygen devices. This increased velocity promotes turbulent flush of the airway, even for patients breathing very rapidly.

The high velocity breathing gases delivered by Precision Flow systems both actively push the air out of the anatomical dead space through the mouth and nose and also replace air containing carbon dioxide from the lungs with freshly oxygenated air.

Diagram depicting the ability of high velocity air to displace dead air in the nasal cavities and the back of the throat.



Increasing the flow rate of untreated air would typically present challenges to the upper airway structures which are responsible for both heating and humidifying the inhaled gas prior to reaching the lungs. The increased air flow has the potential to cause drying and damage to the mucosa, which in turn could lead to complications such as increased infection rates. Breathing gases provided by our High Velocity Therapy products are temperature controlled and humidified both for patient comfort as well as to protect the integrity of the airway. This is accomplished by a proprietary vapor transfer cartridge, or VTC, containing water-vapor-permeable hollow fibers that provide a high surface area allowing air to become saturated with water vapor at body temperature. The result is a very fine, molecular water vapor that is energetically stable.

An important factor in providing temperature-controlled humidified air to patients is ensuring that the intended temperature and humidity are maintained as the air travels from the device to the patient. Our High Velocity Therapy products accomplish this by using a proprietary triple-lumen water-jacketed delivery tube which maintains the air at a constant temperature throughout the length of the delivery tube. This design, coupled with the very fine, molecular water vapor generated by our proprietary VTC, is designed to prevent water from condensing in the delivery tube and to eliminate the risk of having liquid water introduced into the patient's airway. Other conventional humidified high flow oxygen delivery device manufacturers create humidified breathing gases by heating a bulk volume of water to create steam, which is then transferred to patients through electrically heated concentric wires. This results in the breathing gases passing through areas of uneven heating, including areas of excess heat which could be dangerous to the patient as well as cooler areas where condensation, or rainout, occurs. Delivery of liquid water rainout into the nose of the patient is both uncomfortable and potentially harmful. The Precision Flow systems' triple-lumen delivery tube has been shown in a study we sponsored to provide excellent control of rainout of condensation as compared to the humidified breathing gas systems with the heated wire.

The oxygen content of the air and its flow rate can be precisely regulated by the Precision Flow systems using a simple, intuitive single-dial interface. Connections to air and oxygen are through standard wall connectors or via standard oxygen and air tanks typically available in hospitals. The Precision Flow systems make use of industry-standard, user-replaceable oxygen sensors to measure oxygen concentrations.

Benefits of High Velocity Therapy

We believe our High Velocity Therapy technology addresses the key limitations of existing respiratory distress treatment options and provides the following principal benefits to hospitals, patients and providers:

- ***Meaningful improvement in patient comfort and compliance.*** Our proprietary High Velocity Therapy technology is an innovative solution that provides non-invasive ventilatory support and enhances patient comfort and compliance when compared to NiPPV. According to a third-party clinical study published in the November 2007 issue of *Respiratory Care*, approximately 30% of patients are intolerant of NiPPV masks. The tight-fitting and difficult to seal masks can cause patient discomfort, anxiety and complicate the care required to support patients. In a Company-sponsored, randomized clinical trial, physicians reported a higher median score for High Velocity Therapy technology than NiPPV for patient comfort, ease of use, clinical response and need for monitoring, which we believe is due to properly conditioned medical gases being delivered through a small-bore nasal interface that does not completely cover the patient's nose and mouth. While using our products, patients can eat and drink, talk with their caregivers and loved ones, take oral medications and may remain ambulatory. For parents with infants in the NICU, our product allows more direct skin-to-skin contact between the parents and their babies.
- ***Reduced risk of pressure ventilation related side effects.*** In addition to improving overall patient comfort and ability to communicate, we believe our Precision Flow systems address other negative side effects caused by pressure ventilation and tight-fitting masks. These potential side effects include facial skin pressure ulcers, lung injury, claustrophobia, patient anxiety and risk of vomiting and aspiration.
- ***Facilitation of patient admissions to lower intensity, lower cost and less capacity-constrained care settings.*** As we believe our Precision Flow systems are more easily tolerated by patients, the monitoring requirements may be lower, which may increase the likelihood that a patient can be admitted to a general care floor, step-down unit or discharged home from the ED. Patients who are placed on NiPPV in an ED are often admitted to an ICU. In comparison, in a multicenter utilization study we sponsored that included 128 patients with respiratory distress treated in emergency rooms with High Velocity Therapy technology, the physicians' perception was that 54% of the patients could be transferred to general care floors as opposed to being admitted to the ICU. An independent third-party study published in the June 2005 issue of *Critical Care Medicine* determined the average cost for a typical three day stay in the ICU in the United States was $13,347. The cost increased by an average of 47% to $19,558 when the patient required mechanical ventilation. To the extent our products are able to reduce the number of patients requiring transfer to the ICU, these treatment costs can be reduced.
- ***Clinician workflow benefits, including easier administration and reduced patient monitoring.*** As the patient monitoring requirements may be lower than NiPPV, our Precision Flow systems may improve clinician and hospital workflow. Additionally, unlike conventional humidified high flow oxygen delivery devices, our Precision Flow systems can be connected directly to standard nurse call systems found in most hospitals. Connecting to the nurse call systems allows the nursing staff to be immediately alerted to alarms indicating that the patient may not be obtaining optimal therapy. Our Precision Flow Hi-VNI and Precision Flow Plus

systems can also be connected to an electronic medical record, or EMR, system to record the delivered flow rate, temperature, and percent oxygen. These accessories help reduce the time clinicians need to spend with a single patient and enable them to have more time to see other patients.

We believe we can replace NiPPV as the standard of care for treating respiratory distress patients who require non-invasive ventilatory support and who are capable of spontaneously breathing. The table below highlights the key advantages of High Velocity Therapy technology over NiPPV.

Advantages of High Velocity Therapy over NiPPV

Patients	• Potential opportunity for reduced patient monitoring • Mask-free • Facilitates ability to eat, drink, talk, participate in care and take oral medications • Enhanced patient comfort • Facilitates skin-to-skin care (“kangaroo care” for infants)
Clinicians	• Fewer adverse side effects • Improved workflow • Potential opportunity for reduced patient monitoring
Hospitals	• Potential to reduce ICU admission rate • Improved workflow • Lower capital investment

Overview and Benefits of our Oxygen Assist Module

Our Oxygen Assist Module is a module designed for use with most versions of our Precision Flow systems, as well as our next generation HVT 2.0, and is designed to help clinicians maintain oxygen levels within a tight SpO2 range. The Oxygen Assist Module adjusts delivered FiO2 in response to SpO2 readings captured by a standard pulse oximetry probe. We launched our Oxygen Assist Module in the United Kingdom, select European markets, and Israel in late 2020 and are presently seeking FDA approval of this technology in the United States.

We believe our Oxygen Assist Module has the potential to address the key limitations of utilizing manual control to maintain oxygen levels, particularly in neonates, within a tight SpO2 range, and provides the following principal benefits to hospitals, patients and providers:

- Allows reliable realization of SpO2 target;
- Assists staff in maintaining targeted SpO2 range, including during stress, movement and, with neonates, feeding;
- May allow nurses to spend more time with patients and parents and less time changing settings;
- Allows for further evaluation of consequences of selected SpO2 targeted range, including clinical indications, outcomes, and workflow improvement; and
- Allows for the use of the Precision Flow system to provide respiratory support and its attendant benefits, including facilitation of cuddling and kangaroo care with neonates.

The Oxygen Assist Module is not an SpO2 monitor and does not eliminate the need for separate and independent patient monitoring.

Our Product Portfolio

High Velocity Therapy Family

We currently offer four versions of our Precision Flow systems: Precision Flow Hi-VNI, Precision Flow Plus, Precision Flow Classic and Precision Flow Heliox. Our Precision Flow systems include a capital unit, a single-use disposable and a nasal interface. The capital unit contains all the electronic components and the input gas controls that enable the delivery

of breathing gas at a precise level of oxygenation at flow rates, controlled by the operator, ranging from 1 to 40 liters per minute. All of our Precision Flow versions are integrated systems that provide precise user control of temperature, air flow and percentage oxygen through a simple one-button interface. Setup time, including warm-up time, for all of our Precision Flow versions is less than five minutes and alarms are incorporated into the system to alert the operator to disruption of respiratory support. All four versions are also mounted on a roll stand pole for easy transfer, use and visualization of the displayed settings. All four versions are easy to set up and require little support to operate beyond changing sterile inhalation water bags as needed.

The Precision Flow Hi-VNI system was fully launched in February 2019. When compared to the Precision Flow Plus, which was launched in April 2017, the Precision Flow Hi-VNI system includes incremental hardware and software updates to improve the reliability and ease of manufacture and to comply with the Electromagnetic Compatibility or EMC 4th Edition requirements for medical devices. The primary change was to limit the maximum temperature to 39 degrees Celsius. As with the Precision Flow Plus, the Precision Flow Hi-VNI system offers connectivity to a hospital's nurse call system to alert the staff to disruption of the patient's respiratory support and/or to most hospitals' EMR systems to record the user selected and current delivered flow rate, temperature, percent oxygen, and the status of the supply gas connections and water supply as well as any fault codes.

The Precision Flow Heliox also includes the same High Velocity Therapy technology as the other Precision Flow versions and is also able to precisely deliver heliox gas.

We received 510k clearance of our next generation HVT 2.0 High Velocity Therapy system from the FDA in 2021 and began a limited market release of this system in early 2022. The HVT 2.0 represents the next generation of High Velocity Therapy. The system retains the core competencies of the current Precision Flow platform and, with an internal blower, is designed to eliminate the need for wall air. With a variable oxygen connection (tank, wall or concentrator) the HVT 2.0 system is designed to support patients wherever they need respiratory support, including outside of the hospital in a home or future use in a field transport setting. A large intuitive display with touchscreen operation, on screen troubleshooting guidance, and a fully assembled disposable are intended to minimize clinician time spent on operating the equipment so they can focus on their patient.

The single-use, disposable component of our Precision Flow systems has two parts: (1) the disposable patient circuit, or DPC, which includes all of the components that generate the temperature-controlled humidified breathing gas, including the VTC and (2) the triple-lumen delivery tube which ensures the heated, humidified gas is delivered from the DPC to the patient at constant temperature and humidification level. We also sell a series of small-bore nasal interfaces and adapters. The interfaces we offer come in a variety of sizes, ranging from premature infants to adults, allowing clinicians to select an interface that blocks less than half of the external opening of each nostril, thereby maximizing the technology's ability to flush the anatomical dead space.

Companion Products and Enhancements

We sell companion products that facilitate clinical use and enable rapidly growing market acceptance and expansion. These products include (i) the Vapotherm Transfer Unit 2.0, which allows patients to be transferred between care areas within the hospital or ambulate while on therapy, (ii) the Q50 compressor, which provides a compact, relatively low noise, low cost source of compressed air necessary to run the Precision Flow systems in areas of the hospital without access to a wall gas source, (iii) the aerosol aeroneb adaptor, which is designed to facilitate delivery of ultrasonic aerosolized medication, (iv) an aerosol disposable patient circuit that is designed to streamline both continuous and intermittent delivery of aerosol medication for patients on High Velocity Therapy, and (v) a tracheostomy adaptor that simplifies the connection of the Precision Flow systems to a tracheostomy collar used to wean patients off mechanical ventilation. Specialized disposable products also enable the delivery of specialized nitric oxide and heliox breathing gases. We also sell a new lightweight ProSoft cannula that is designed to provide gentle contact with the skin.

In addition, we have product enhancement projects ongoing at any point in time. These enhancements incorporate customer feedback with the goal of improving the patient and caregiver experience.

Market Expanding Products

We are in the process of seeking FDA approval of our Oxygen Assist Module and have obtained an investigational device exemption for pediatric evaluation of the Oxygen Assist Module. On April 2, 2020, the Oxygen Assist Module was granted Breakthrough Device Designation by the FDA for on-demand titration of oxygen into warm humidified breathing gases delivered to spontaneously breathing patients based on continuous non-invasive monitoring of pulse oxygen saturation.

FDA's Breakthrough Device Program is intended to help patients and healthcare providers receive more timely access to breakthrough technologies that may have the potential to provide more effective treatment or diagnosis of life-threatening or irreversibly debilitating diseases or conditions. The program is designed to expedite the development, assessment and FDA review of breakthrough technologies.

On February 12, 2021, the FDA notified us that, under FDA Emergency Use Authorization ("EUA") issued on March 24, 2020, the HVT 2.0 was authorized for emergency use in healthcare settings to treat patients during the COVID-19 pandemic, subject to the conditions set forth in the EUA.

Clinical Results and Studies and Economic Data

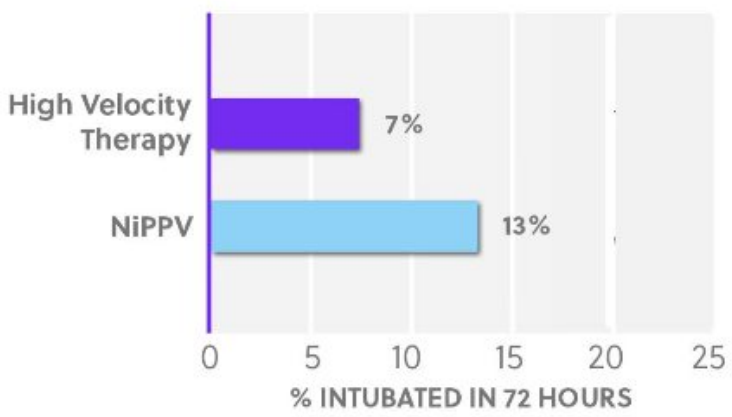
We have a compelling body of clinical studies and economic data that supports the use of High Velocity Therapy technology for treating respiratory distress and providing non-invasive ventilatory support. Maintaining an ongoing cadence of clinical study and economic data publications is an important component of our strategy, including both Vapotherm-sponsored research and providing grants for investigator-initiated research.

High Velocity Therapy Compared to NiPPV

A significant body of clinical studies across multiple spontaneously-breathing patient populations has validated High Velocity Therapy technology as a safe and effective alternative to NiPPV. Additionally, High Velocity Therapy affects ventilatory support through a process called high-velocity nasal insufflation. In the adult population, we sponsored a 204 patient (100 NiPPV patients and 104 High Velocity Therapy technology patients), multisite randomized controlled trial in the ED, which was published in the July 2018 issue of *Annals of Emergency Medicine*. Patients in respiratory distress were recruited with the need for non-invasive ventilatory support in the ED. Of the patients who were enrolled in the study, 65 were suffering from respiratory failure due to COPD including hypercapnia, the inability to effectively clear carbon dioxide from the body. The primary outcome measure was therapy failure requiring intubation, the insertion of a plastic tube into the trachea to maintain an open airway for mechanical ventilation, within 72 hours of initiation or a clinical decision to cross-over to the alternative therapy. This study concluded that high velocity nasal insufflation delivered with High Velocity Therapy technology is non-inferior to NiPPV in preventing patients from being intubated and receiving mechanical ventilation.

Patients were recruited with the need for non-invasive ventilatory support and followed for 72 hours. The primary outcome measure was respiratory failure requiring intubation within 72 hours of initiation or clinical decision to cross-over to the alternative therapy. The outcome showed High Velocity Therapy technology was non-inferior to NiPPV. The following chart conveys the rates of failure resulting in intubation for those randomized to High Velocity Therapy technology and NiPPV. There was no statistically significant difference between the two.

Rate of intubation in a 204-patient, multicenter randomized clinical trial of ED patients with respiratory distress.

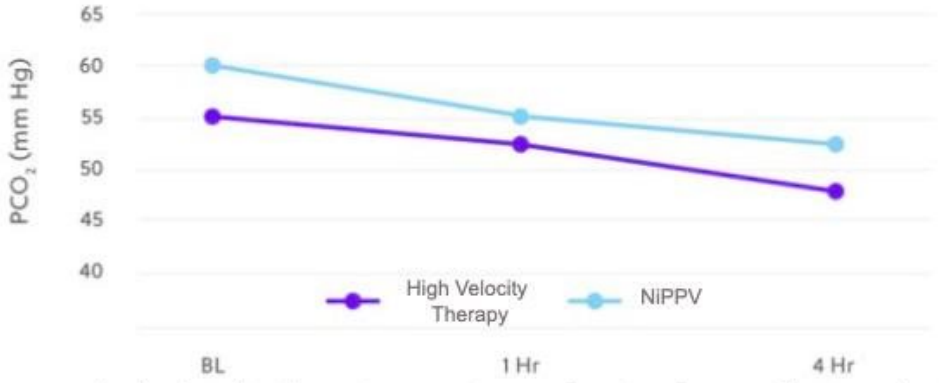


**High Velocity Therapy does not provide the total ventilatory requirements of patients.*

Secondary outcomes included monitoring of vital signs, oxygen and carbon dioxide in the blood, and patient reports of their perception of shortness of breath were monitored during the first four hours of therapy, and High Velocity Therapy technology performed as well as NiPPV during this period. The important measure of the effect of the therapy on providing ventilatory support is blood carbon dioxide and how that changes over time. Elevated blood carbon dioxide levels will generally decline over time when a patient receives adequate ventilatory support. Use of both High Velocity Therapy technology and NiPPV led to similar decreases in carbon dioxide levels within the blood.

The chart below demonstrates the changes observed in blood gas values for both High Velocity Therapy technology and NiPPV therapy. Both begin at baseline with elevated carbon dioxide values, and both drop at a similar rate over time, at one hour and four hours of therapy.

Blood carbon dioxide levels over time

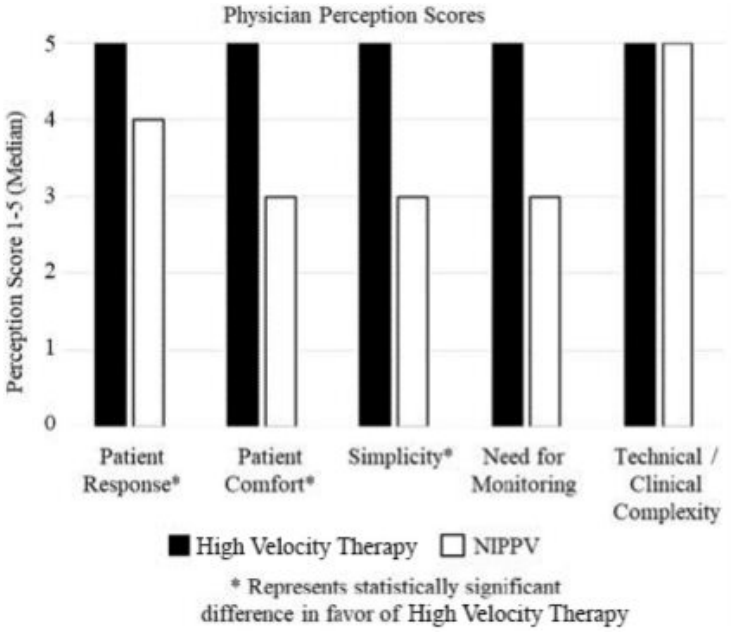


Blood carbon dioxide tension over time as a function of group: all patients (n = 204). Adapted from Doshi et al 2018.

*high velocity therapy does not provide the total ventilatory requirements of patients

The clinicians involved in the trial were asked for their perception of the various therapies. The clinicians reported a higher median score for High Velocity Therapy technology than NiPPV for patient comfort, ease of use, clinical response and need for monitoring. The clinicians reported the same median score for High Velocity Therapy technology and NiPPV for technical/clinical complexity. The authors also concluded that patients treated with High Velocity Therapy technology can more easily communicate, receive oral medications, and eat without interruption of therapy, which are limitations of NiPPV.

Median clinicians' perception of High Velocity Therapy to NiPPV on a scale of 1 to 5 where 5 represents the best score



In February 2018, the *NEJM Journal Watch*, which reviews and summarizes medical research studies across 12 specialties, concluded after reviewing our Company-sponsored ED study described above that High Velocity Therapy technology is easier to set up than NiPPV. Further, the *NEJM Journal Watch* noted that High Velocity Therapy technology has the potential to replace NiPPV in EDs, ICUs and ambulances.

A subgroup analysis of these data was published in *Heart and Lung* in April 2020 looking at the effectiveness of High Velocity Therapy technology specifically in the 65 patients among the 204 in this study that were diagnosed with significant hypercapnia. The ability of High Velocity Therapy technology to adequately provide ventilatory support is particularly important in this population. This subgroup analysis showed that 6% of the High Velocity Therapy technology patients and 16% of the NiPPV patients required intubation within the first 72 hours of care after admission, with comparable ability to reduce carbon dioxide levels over time. The subgroup analysis concluded that High Velocity Therapy technology provided ventilatory support similar to NiPPV in patients presenting with hypercapnic respiratory distress. Another sub-group analysis of these data was published in the American Journal of Emergency Medicine in April 2020 looking at the effectiveness of High Velocity Therapy technology specifically in the 42 patients from the primary ED study who presented with decompensated heart failure. This subgroup analysis demonstrated comparable results between High Velocity Therapy technology and NiPPV. The results from these subgroup analyses may be valued by ED physicians who need to make treatment decisions before knowing the patient diagnosis.

High Velocity Therapy technology was also observed in a third-party study published in the May 2013 issue of the *Journal of Pediatrics* to have similar efficacy when compared to nCPAP in a randomized controlled trial of premature infants who were receiving non-invasive ventilatory support after being removed from intubation, or extubation. nCPAP is the standard non-invasive therapy for management of respiratory distress in neonates in the NICU. nCPAP is administered using a tight-fitting nasal plugging cannula and delivers pressure to the lungs. It is efficacious, but it is also associated with trauma to the face of the baby, pressure and volume-related complications to the chest, and limitation of access to both parents and caregivers to maintain close contact with the newborns. High Velocity Therapy technology produced similar rates of extubation failure as the standard of care nCPAP, and significantly reduced nasal trauma.

Additionally, High Velocity Therapy technology was observed in a third-party study published in the May 2016 issue of *JAMA Pediatrics* to be non-inferior to NiPPV as a primary respiratory support therapy in a randomized controlled clinical trial of premature newborn infants with respiratory distress syndrome. In this trial, 316 infants were randomized to High Velocity Therapy technology or NiPPV. The primary outcome of the trial was the number of patients who required intubation and mechanical ventilation within 72 hours, and there was no significant difference seen between High Velocity

Therapy technology and NiPPV. No significant differences in other measures such as the length of time on respiratory therapy, infection rates or other prematurity-associated complications such as bronchopulmonary dysplasia, a disease in newborns caused by destruction of lung tissue, were reported.

The results from an independent clinical trial of High Velocity Therapy technology versus NiPPV in 76 preterm infants published in the May 2015 issue of *Pediatric Pulmonology* similarly suggest that High Velocity Therapy technology is non-inferior to NiPPV. These trials support the use of High Velocity Therapy technology as an alternative to nCPAP and NiPPV for primary and post-extubation support of neonates in respiratory distress.

Economic Cost Savings Data

An independent third-party study published in the June 2005 issue of *Critical Care Medicine* determined the average cost for a typical three day stay in the ICU in the United States is $13,347. The cost increased by an average of 47% to $19,558 when the patient required mechanical ventilation. To the extent our products are able to reduce the number of patients requiring transfer to the ICU, these treatment costs can be reduced. Treatment of patients with High Velocity Therapy technology can impact admission and placement of patients due to the lower complexity of High Velocity Therapy technology as compared to NiPPV. This is dependent on the individual sites, which often require admission to the high cost and resource-constrained ICUs if NiPPV is initiated on the patient. In a multicenter utilization study we sponsored, published in the Winter 2015 issue of *Respiratory Therapy*, of the 128 patients with respiratory distress treated in emergency rooms with High Velocity Therapy technology, treating physicians perceived that 54% of patients could be admitted to the general care floor, as opposed to the ICU. This finding is exemplified by a single-patient case study report from Athens Regional Medical Center. In this report, a patient with end-stage COPD who was well-known to that facility had recently been discharged from the hospital following a three day stay in the ICU where the patient was intubated and mechanically ventilated. Upon a subsequent arrival in the ED with severe difficulty breathing, this patient was treated using High Velocity Therapy technology and within 44 minutes her respiratory rate had decreased from 36 to 20 breaths per minute. Blood measurements later confirmed a normalization of pH, reduction in carbon dioxide, and maintenance of oxygenated levels of hemoglobin. The patient was kept overnight and discharged the following day. We believe the less intensive nature of the High Velocity Therapy technology permitted the physician to direct the patient to the general care floor, rather than the ICU, in this situation resulting in a savings of an estimated $3,750 for this hospital (estimated $4,500 cost for a three day stay in the ICU versus an estimated $750 cost for a one day stay on the general care floor).

Additionally, patients who are intolerant of NiPPV devices are often sedated and potentially intubated and escalated to mechanical ventilation, an invasive procedure that often results in increased care costs, increased lengths of stay, ventilator dependence, and increased morbidity and mortality. Because patients who are placed on High Velocity Therapy technology are no more likely to fail to intubation than NiPPV patients and High Velocity Therapy technology may be more easily tolerated, its utilization has the ability to reduce the number of NiPPV intolerant patients who otherwise would have been intubated. Therefore, in addition to increased patient benefits due to potentially avoiding intubation for patients who are intolerant of the masks associated with NiPPV, there may be substantial savings to the healthcare system for each patient that can be successfully treated with High Velocity Therapy technology.

Studies have shown that reducing the duration of mechanical ventilation days is an important element in reducing the potential for ventilator-associated consequences, including pneumonia, a life-threatening complication associated with mechanical ventilation. One role LTACHs play is to help wean patients from their dependence on mechanical ventilation. Gaylord Hospital, a LTACH, presented at the 2017 National Association of Long Term Hospital conference that their adoption of High Velocity Therapy technology helped them achieve an average reduction of four days of mechanical ventilation per patient, yielding an annual average cost savings for that facility of $394,000 between 2012 and 2015.

Oxygen Assist Module Prototype Study

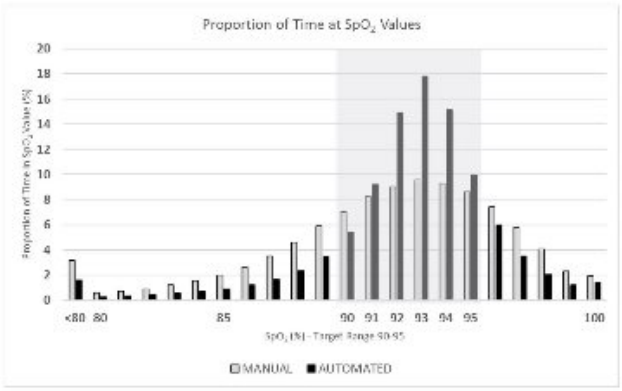
Our Oxygen Assist Module helps clinicians maintain oxygen levels within a target range by simplifying and automating adjustments to most versions of our Precision Flow systems' delivery of oxygenated breathing gases. The adjustments are based on the module's continuous readings of a patient's oxygen from a standard pulse oximetry probe. In November 2018, the *Archives of Disease in Childhood: Fetal & Neonatal edition* published the results of our sponsored prospective, two-center, order-randomized cross-over study performed at two NICUs in the United Kingdom, designed to evaluate the performance of a prototype of our Oxygen Assist Module technology as a module to our Precision Flow Plus system. The Oxygen Assist Module is referred to in the study as the IntellO2.

The target SpO_2 range set in this study was 90-95% in preterm babies being supported by High Velocity Therapy technology. Babies were randomized to receive 24 hours of either manual control or automatic control using the Oxygen Assist Module. After the first 24 hours, the babies were crossed over to the alternative therapy for another 24 hours. The primary

outcome measure was percent of time spent within the target SpO_2 range. Secondary outcomes included the overall proportion and durations of SpO_2 within specified hyperoxemic and hypoxemic ranges, and the characteristics of the times within and outside SpO_2 target range. Data were analyzed from 30 preterm infants with median gestation at birth of 26 (24–27) weeks, age during the study of 29 (18–53) days and study weight 1080 (959–1443) g.

When using the Oxygen Assist Module, clinician performance in maintaining SpO_2 within the target SpO_2 range was significantly greater proportion of the time than during manual control alone, while at the same time requiring significantly fewer manual adjustments to the equipment. The median target SpO_2 range was achieved 80% of the time on automated (Oxygen Assist Module) control compared with 49% under manual control. In addition to the greater proportion of time in the target range, there were also fewer episodes of transient severe hypoxemia (defined as SpO_2 below 80% lasting at least 60 seconds) under automated control compared with manual control. There were no differences in the number of episodes per hour of SpO_2 above 98% between the study arms, but the average episode duration and the total percentage of time spent above the SpO_2 target range was significantly lower under Oxygen Assist Module automated control as compared to manual control.

The chart below depicts a composite SpO2 histogram of all patient data (n=30) with paired bars as automated control (white) and manual control (black). The frequency of SpO2 values denotes the proportion of total time (%) spent at each SpO2, with aggregated SpO2 values <80%. The target SpO2 range for babies receiving oxygen (90%–95%) is illustrated in the blue outlines. The chart is based on graphic found in the aforementioned November 2018 edition of the *Archives of Disease in Childhood: Fetal & Neonatal edition*.



We are currently enrolling patients in a pediatric evaluation of the Oxygen Assist Module pursuant to an Investigational Device Exemption received from the FDA.

Sales and Marketing

As of December 31, 2021, our sales organization consisted of 102 full time employees serving our U.S. market across 60 sales territories and 35 full time employees serving international markets, 13 of whom serve our U.K. market. In 2021, 74.3% of our revenue was derived in the United States and 25.7% was derived outside the United States. No single customer accounted for more than 10% of our revenue.

Commercial Activities Within the United States

We work to grow the sales of our disposable products by increasing the utilization and installed base of our Precision Flow systems. We utilize a direct sales organization in the United States that leverages numerous call points within the hospital, including physicians, respiratory therapists and nurses. Our sales team is focused on building relationships with clinicians across care settings, including EDs and adult, pediatric and neonatal ICUs, enabling our products to follow patients through the care continuum. We offer different options to our hospital customers for acquiring Precision Flow capital units, ranging from the purchase of the Precision Flow capital units with payment in full at the time of purchase, to financed purchases of the Precision Flow capital units, to bundled discounts involving the placement of Precision Flow capital units for use by the customer at no upfront charge in connection with the customer's ongoing purchase of disposable products.

We have structured our sales and clinical support team with specialized roles to sell our Precision Flow systems and single-use disposables, while delivering customer support and medical education on an ongoing basis. Our field sales representatives are responsible for identifying key customer prospects, educating them on the value of our High Velocity Therapy technology, gaining their commitment for acquiring and utilizing our capital units and introducing our clinical educators.

Our clinical educators enhance the experience for customers and help facilitate adoption and utilization. We established a medical education department that develops and delivers physician-to-physician, Company-sponsored education events, and sponsors continuing medical education programs focused on addressing respiratory distress.

Our customer service and technical support team is responsible for addressing maintenance, repairs and general product and technical questions to help ensure uninterrupted patient treatments. We also use an inbound digital marketing campaign to drive leads and accelerate sales. We leverage the internet, social media, and email channels to increase brand awareness and educate customers. For example, during 2020 and 2021 we were able to utilize our online Vapotherm Academy to train more than 37,000 caregivers on High Velocity Therapy technology, which proved critical during the COVID-19 pandemic when we were not able to directly access many hospitals in the United States, United Kingdom, and around the world. Data and analytics drive our decision making and help us hone our messaging and strategies. Educated and interested potential customers convert to sales prospects on our website and all leads integrate with our CRM system.

Commercial Activities Outside of the United States

We conduct our international business in the United Kingdom and Germany through a direct sales organization which, in the United Kingdom, is operated by our wholly owned subsidiary, Solus Medical Limited ("Solus Medical"). We conduct our remaining international business through a distributor model, partnering with 50 distributors in 54 countries around the world. We focus our efforts on our most established and fastest growing markets, including the United Kingdom, Germany, Brazil, Mexico, Spain, Italy and Japan. We have directly employed or retained through professional employment organizations 48 individuals to support our distributors in several of these key markets. Additionally, in the United Kingdom, our subsidiary Solus Medical now has 13 full time commercial employees. As in the United States, our direct sales teams in the United Kingdom and Germany and our distributors around the world work to grow the sales of our disposable products by increasing the utilization and installed base of our Precision Flow Systems. Our international sales and marketing efforts also encompass marketing of our Oxygen Assist Module in select countries. Our direct sales teams in the United Kingdom and Germany and our distributors around the world work to offer different options to our customers for acquiring Precision Flow capital units and Oxygen Assist Modules as appropriate on a country by country basis, ranging from the purchase of the Precision Flow capital units with payment in full at the time of purchase, to financed purchases of the Precision Flow capital units, to bundled discounts involving the placement of Precision Flow capital units for use by the customer at no upfront charge in connection with the customer's ongoing purchase of disposable products. We offer the Oxygen Assist Module in select international markets on both sales and time-based subscription models. We leverage our digital marketing platform abroad to educate our international clinicians, focusing primarily in the United Kingdom. We continue to evaluate market opportunities outside of the United States for business expansion.

Reimbursement

Payment for patient care in the United States is generally made by third-party payors, including private insurers and government healthcare programs. The reimbursement from third-party payors for patients that require High Velocity Therapy technology is typically intended to cover the overall cost of treatment, including the cost of our devices used during the procedure as well as the overhead cost associated with the facility where the procedure is performed. We do not directly bill any third-party payors and receive payment from the hospital or providers for our devices or services. RespirCare, the pulmonary medical practice with which we have affiliated, typically does bill third party payors in the ordinary course of its business.

Reimbursement for hospital services, including the cost of our devices, during an inpatient stay generally is made by the payor directly to the healthcare provider under a prospective payment system that is determined by a classification system known as Diagnosis Related Groups, or DRGs. A DRG is a statistical system of classifying any inpatient stay into groups for the purposes of payment using a number of factors including, among other things, the principal diagnosis, major procedures, discharge status, patient age and complicating secondary diagnoses. DRGs are used in both acute and chronic care settings and employed by both private insurers and government payors. Rather than paying the hospital or provider for what it spent caring for a patient, payors pay a fixed amount based on the patient's DRG. Similar reimbursement methodologies that bundle the cost of our devices into a provider's payment also exist for services provided to patients in the ED and out-patient settings.

Reimbursement for physician and clinical staff services provided in connection with Vapotherm Access is generally made by the payor directly to the healthcare provider based on applicable Current Procedural Terminology reimbursement codes, or CPT codes. There are presently five CPT codes that may describe professional services provided in conjunction with Vapotherm Access services. Coding guidelines from the American Medical Association and third-party payors govern when an applicable CPT code may be provided to report such services for reimbursement.

Research and Development

Maintaining a strong cadence of new product introductions is an integral part of our strategy. We launched our Oxygen Assist Module in the United Kingdom, select European markets, and Israel in late 2020 and are presently seeking FDA approval of this technology in the United States. We previously entered into an agreement with a third party for a perpetual, exclusive, world-wide license to certain intellectual property related to the Oxygen Assist Module for the delivery of non-invasive ventilatory support. Pursuant to the agreement, we began paying a royalty starting on the date of the first commercial sale of the Oxygen Assist Module, and continuing for a ten year term equal to 10% of the first $3.0 million of Oxygen Assist Module revenue, 5% of the next $6.0 million of Oxygen Assist Module revenue, and 2% of any additional Oxygen Assist Module revenue until the end of the ten year term. We also license the pulse oximetry technology utilized with the Oxygen Assist Module from other manufacturers. Finally, HGE has a license agreement with Temple University under which HGE is required to pay a 1% royalty on all HGE commercial sales of HGE service offerings relating to the clinical management of and data regarding patients with COPD. The license agreement will remain in effect until the last to occur of the following (i) August 1, 2022, (ii) the expiration of the life of the last to expire of the licensed patents, and (iii) a complete cessation of reasonable efforts on the part of HGE to sell, service, or otherwise derive revenue from any licensed product.

Competition

The medical device industry is subject to rapid change from the introduction of new products and technologies and other activities of industry participants. We compete as a clinically validated alternative to NiPPV for treatment of patients who are suffering from respiratory distress.

As our products are capable of treating respiratory distress, including those suffering from low oxygen levels, as well as those who have historically required NiPPV because they were unable to flush retained carbon dioxide from their respiratory system, we consider our primary competition to be NiPPV manufacturers, including Philips Respironics. We also compete on a secondary basis with manufacturers of conventional heated humidified high flow oxygen delivery products, such as Fisher & Paykel Healthcare.

We believe that the primary competitive factors in the respiratory distress market are:

- product efficacy and ability to prevent intubation;
- product safety, reliability and durability;
- product ease of use and patient comfort;
- quality and volume of clinical evidence;
- product support and service;
- pricing and revenue strategies;
- technological innovation;
- effective marketing to and education of clinicians;
- sales force experience and access; and
- Company, product and brand recognition.

Other companies that offer treatments for respiratory distress against which we compete are larger businesses that have greater resources than we do. NiPPV is an established proven therapy and is currently better known to physicians, nurses and respiratory therapists, and it is currently considered the standard of care for treating patients with respiratory distress. However, we believe clinician awareness of High Velocity Therapy technology is increasing, particularly as a result of the COVID-19 pandemic. HGE competes in the technology enabled services and digital health industries, where some of its competitors include Livongo Health Inc., Vivify Health Inc., Propeller Health Inc., Conversa and Spire Health Inc.

Intellectual Property Portfolio

As of December 31, 2021, we held more than 165 issued patents and more than 95 patent applications, totaling an active patent portfolio of over 260 filings granted or pending, with expiration dates ranging from April 2022 through August 2039. These filings can be organized into four main categories representing our patent portfolio: Precision Flow, next generation system filings, Flow Rest, and various accessory technologies. In the United States, we hold 14 issued patents for the Precision Flow family, 11 for the Flow Rest family (a legacy device), nine for the accessories (including the Oxygen Assist Module), and five for our next generation technology. The Precision Flow patents are expected to expire between December 2022 and March 2033, the Flow Rest patents are expected to expire between November 2026 and December 2038, and the accessories patents are expected to expire between December 2031 and August 2038, with the next generation patents expected to expire between November 2033 and August 2039. Additionally, we have eight pending U.S. patent applications directed to our next generation technologies, two pending U.S. patent applications directed to our Precision Flow systems technology, one pending U.S. patent application directed to our Flow Rest technology and 13 pending U.S. patent applications directed to accessories for the aforementioned technologies (including the Oxygen Assist Module). We maintain a strategic international patent portfolio primarily in the European Union, Australia, Japan and China, with other counties pursued in select circumstances. Since 2016, we have maintained and executed on deliberate innovation areas designed to sustain the continued growth of our patent portfolio to protect our proprietary technology from competitor use.

As of December 31, 2021, we have at least 14 trademark registrations with the U.S. Patent and Trademark Office, at least 19 trademarks applications pending with the U.S. Patent and Trademark Office, at least 13 trademarks with common law rights, and a wide range of international protection of its trademarks with a focus of increasing brand awareness and market penetration globally.

Manufacturing and Supply

We manage all aspects of product supply through our operations team based in Exeter, New Hampshire. We manufacture certain components of our Precision Flow systems in-house, but primarily rely on third-party suppliers to source the majority of Precision Flow components. We outsource all of the manufacturing of our Oxygen Assist Module. Outsourcing manufacturing of both components or finished goods, as applicable, reduces our need for capital investment and provides expertise and the capacity necessary to meet demand for our Precision Flow systems and Oxygen Assist Module. During 2021, we continued to make improvements and adjustments to our production capacity in response to high demand for our products and labor shortages, including engaging a third-party manufacturer to assemble certain of our products at its facility in Tijuana, Mexico and hiring a significant number of temporary production workers. We assess, qualify and select our suppliers with a view towards ensuring that our High Velocity Therapy systems and Oxygen Assist Module, and their components are safe and effective, adhere to all applicable regulations, are of the highest quality, and meet our supply needs. Our quality assurance process monitors and maintains supplier performance through qualification and periodic supplier reviews and audits against the requirements of the FDA, the International Organization for Standardization and our own policies and procedures.

Certain components used in our High Velocity Therapy systems, and in the case of our Oxygen Assist Module, the finished good itself, are supplied by single source suppliers. Our suppliers manufacture the components they produce for us and test our components and devices to our specifications. We intend to maintain sufficient levels of inventory to enable us to continue our operations while we obtain another supplier if one or more of our single source suppliers were to encounter a delay in supply or end supply.

Government Regulation

Our products and our operations are subject to extensive regulation by the FDA and other federal and state authorities in the United States, as well as comparable authorities in the EEA (which is comprised of the 28 Member States of the European Union plus Norway, Liechtenstein and Iceland) and other countries in which we conduct business. Our products are subject to regulation in the United States as medical devices under the Federal Food, Drug, and Cosmetic Act, or FDCA, as implemented and enforced by the FDA. The FDA regulates the development, design, non-clinical and clinical research, manufacturing, safety, efficacy, labeling, packaging, storage, installation, servicing, recordkeeping, premarket clearance or approval, import, export, adverse event reporting, advertising, promotion, marketing and distribution, and import and export of medical devices to ensure that medical devices distributed domestically are safe and effective for their intended uses and otherwise meet the requirements of the FDCA.

In addition to U.S. regulations, we are subject to a variety of regulations in the EEA governing clinical trials and the commercial sales and distribution of our products. Whether or not we have or are required to obtain FDA clearance or approval for a product, we will be required to obtain authorization before commencing clinical trials and to obtain marketing authorization or approval of our products under the comparable regulatory authorities of countries outside of the United States before we can commence clinical trials or commercialize our products in those countries. The approval process varies from country to country and the time may be longer or shorter than that required for FDA clearance or approval.

FDA Premarket Clearance and Approval Requirements

Unless an exemption applies, each medical device commercially distributed in the United States requires FDA clearance of a 510(k) premarket notification, granting of a *de novo* request, or approval of an application for premarket approval, or PMA. Under the FDCA, medical devices are classified into one of three classes—Class I, Class II or Class III—depending on the degree of risk associated with each medical device and the extent of regulatory controls needed to ensure its safety and effectiveness. Class I includes devices with the lowest risk to the patient and are those for which safety and effectiveness can be assured by adherence to the FDA's General Controls for medical devices, which include compliance with the applicable portions of the Quality System Regulation, or QSR, facility registration and product listing, reporting of adverse medical events, and truthful and non-misleading labeling. Class II devices are subject to the FDA's General Controls, and special controls as deemed necessary by the FDA to ensure the safety and effectiveness of the device. These special controls can include performance standards, post-market surveillance, patient registries and FDA guidance documents. While most Class I devices are exempt from the 510(k) premarket notification requirement, manufacturers of most Class II devices are required to submit to the FDA a premarket notification under Section 510(k) of the FDCA requesting permission to commercially distribute the device. The FDA's permission to commercially distribute a device subject to a 510(k) premarket notification is generally known as 510(k) clearance.

The 510(k) Process

Under the 510(k) process, the manufacturer must submit to the FDA a premarket notification demonstrating that the device is "substantially equivalent" to either a device that was legally marketed prior to May 28, 1976, the date upon which the Medical Device Amendments of 1976 were enacted, and for which a PMA is not required, a device that has been reclassified from Class III to Class II or Class I, or another commercially available device that was cleared through the 510(k) process. To be "substantially equivalent," the proposed device must have the same intended use as the predicate device, and either have the same technological characteristics as the predicate device or have different technological characteristics and not raise different questions of safety or effectiveness than the predicate device. Clinical data is sometimes required to support substantial equivalence.

After a 510(k) premarket notification is submitted, the FDA determines whether to accept it for substantive review. If it lacks necessary information for substantive review, the FDA will refuse to accept the 510(k) notification. If it is accepted for filing, the FDA begins a substantive review. By statute, the FDA is required to complete its review of a 510(k) notification within 90 days of receiving the 510(k) notification. As a practical matter, clearance often takes longer, and clearance is never assured. Although many 510(k) premarket notifications are cleared without clinical data, the FDA may require further information, including clinical data, to make a determination regarding substantial equivalence, which may significantly prolong the review process.

If the FDA agrees that the device is substantially equivalent to a predicate device currently on the market, it will grant 510(k) clearance to commercially market the device. If the FDA determines that the device is "not substantially equivalent" to a previously cleared device, the device is automatically designated under the FDCA as a Class III device. The device sponsor must then fulfill more rigorous PMA requirements, or can request a risk-based classification determination for the device in accordance with the *de novo* process, which is a route to market for novel medical devices that are low to moderate risk and are not substantially equivalent to a predicate device.

After a device receives 510(k) marketing clearance, any modification that could significantly affect its safety or effectiveness, or that would constitute a major change or modification in its intended use, will require a new 510(k) marketing clearance or, depending on the modification, a *de novo* grant or PMA approval. The FDA requires each manufacturer to determine whether the proposed change requires submission of a 510(k) (or a PMA) in the first instance, but the FDA can review any such decision and disagree with a manufacturer's determination. Many minor modifications today are accomplished by a manufacturer documenting the change in an internal letter-to-file. The FDA can review these letters to file during an inspection. If the FDA disagrees with a manufacturer's determination, the FDA can require the manufacturer to cease marketing and/or request the recall of the modified device until 510(k) clearance, *de novo* grant or PMA approval is obtained. In these circumstances, we may be subject to significant regulatory fines or penalties.

De Novo Classification

Medical device types that the FDA has not previously classified as Class I, II or III are automatically classified under the FDCA into Class III regardless of the level of risk they pose. The Food and Drug Administration Modernization Act of 1997 established a route to market for low to moderate risk medical devices that are automatically placed into Class III due to the absence of a predicate device, called the "Request for Evaluation of Automatic Class III Designation," or the *de novo* classification procedure. This procedure allows a manufacturer whose novel device is automatically classified into Class III to request down-classification of its medical device into Class I or Class II on the basis that the device presents low or moderate risk, rather than requiring the submission and approval of a PMA application. Prior to the enactment of the Food and Drug Administration Safety and Innovation Act of 2012, or FDASIA, a medical device could be eligible for *de novo* classification only if the manufacturer first submitted a 510(k) premarket notification and received a determination from the FDA that the device was not substantially equivalent to a legally marketed predicate device. FDASIA streamlined the *de novo* classification pathway by permitting manufacturers to request *de novo* classification directly without first submitting a 510(k) premarket notification to the FDA and receiving a not substantially equivalent determination. Under FDASIA, the FDA is required to classify the device within 120 days following receipt of the *de novo* application. If the manufacturer seeks reclassification into Class II, the manufacturer must include a draft proposal for special controls that are necessary to provide a reasonable assurance of the safety and effectiveness of the medical device. In addition, the FDA may reject the request if it identifies a legally marketed predicate device that would be appropriate for a 510(k) notification, determines that the device is not low to moderate risk, or that general controls would be inadequate to control the risks and special controls cannot be developed. After a device receives *de novo* classification, any modification that could significantly affect its safety or efficacy, or that would constitute a major change or modification in its intended use, will require a new 510(k) clearance or, depending on the modification, another *de novo* petition or even PMA approval.

Clinical Trials

Clinical trials are almost always required to support a PMA and are sometimes required to support a 510(k) submission. All clinical investigations of investigational devices to determine safety and effectiveness must be conducted in accordance with the FDA's IDE regulations which govern investigational device labeling, prohibit promotion of the investigational device, and specify an array of recordkeeping, reporting and monitoring responsibilities of study sponsors and study investigators. If the device presents a "significant risk" to human health, as defined by the FDA, the FDA requires the device sponsor to submit an IDE application to the FDA, which must become effective prior to commencing human clinical trials. A significant risk device is one that presents a potential for serious risk to the health, safety or welfare of a patient and either is implanted, used in supporting or sustaining human life, substantially important in diagnosing, curing, mitigating or treating disease or otherwise preventing impairment of human health, or otherwise presents a potential for serious risk to a subject. An IDE application must be supported by appropriate data, such as animal and laboratory test results, showing that it is safe to test the device in humans and that the testing protocol is scientifically sound. The IDE will automatically become effective 30 days after receipt by the FDA unless the FDA notifies the company that the investigation may not begin. If the FDA determines that there are deficiencies or other concerns with an IDE for which it requires modification, the FDA may permit a clinical trial to proceed under a conditional approval.

In addition, the study must be approved by, and conducted under the oversight of, an Institutional Review Board, or IRB. The IRB is responsible for the initial and continuing review of the study and may pose additional requirements for the conduct of the study. If an IDE application is allowed to go into effect by the FDA and the study approved by the reviewing IRB(s), human clinical trials may begin at a specific number of investigational sites with a specific number of subjects as set forth in the study protocol. If the device presents a non-significant risk to the patient, a sponsor may begin the clinical trial after obtaining approval for the trial by one or more IRBs without separate review from the FDA, but must still follow abbreviated IDE requirements, such as monitoring the investigation, ensuring that the investigators obtain informed consent, and labeling and record-keeping requirements. Acceptance of an IDE application for review does not guarantee that the FDA will allow the IDE to become effective and, if it does become effective, the FDA may or may not determine that the data derived from the trials support the safety and effectiveness of the device or warrant the continuation of clinical trials. An IDE supplement must be submitted to, and allowed to go into effect by, the FDA before a sponsor or investigator may make a change to the investigational plan that may affect its scientific soundness, study plan or the rights, safety or welfare of human subjects.

During a study, the sponsor is required to comply with the applicable FDA requirements, including, for example, trial monitoring, selecting clinical investigators and providing them with the investigational plan, ensuring IRB review, adverse event reporting, record keeping and prohibitions on the promotion of investigational devices or on making safety or effectiveness claims for them. The clinical investigators in the clinical study are also subject to FDA regulations and must obtain patient informed consent, follow the investigational plan and study protocol, control the disposition of the investigational device, and comply with all reporting and recordkeeping requirements. Additionally, after a trial begins, we, the FDA or the IRB could suspend or terminate a clinical trial at any time for various reasons, including a belief that the risks to study subjects outweigh the anticipated benefits.

Post-market Regulation

After a device is cleared or approved for marketing, numerous and extensive regulatory requirements may continue to apply. These include but are not limited to:

- annual and updated establishment registration and device listing with the FDA;
- QSR requirements, which require manufacturers to follow stringent design, testing, control, documentation, complaint handling and other quality assurance procedures during all aspects of the design and manufacturing process;
- advertising and promotion requirements;
- restrictions on sale, distribution or use of a device;
- labeling and marketing regulations, which require that promotion is truthful, not misleading, and provides adequate directions for use and that all claims are substantiated, and also prohibit the promotion of products for unapproved or "off-label" uses and impose other restrictions on labeling;
- the federal Physician Sunshine Act and various state and foreign laws on reporting remunerative relationships with health care customers;
- the federal Anti-Kickback Statute (and similar state laws) prohibiting, among other things, soliciting, receiving, offering or providing remuneration intended to induce the purchase or recommendation of an item or service reimbursable under a federal healthcare program, such as Medicare or Medicaid. A person or entity does not have to have actual knowledge of this statute or specific intent to violate it to have committed a violation;
- the federal False Claims Act (and similar state laws) prohibiting, among other things, knowingly presenting, or causing to be presented, claims for payment or approval to the federal government that are false or fraudulent, knowingly making a false statement material to an obligation to pay or transmit money or property to the federal government or knowingly concealing, or knowingly and improperly avoiding or decreasing, an obligation to pay or transmit money to the federal government. The government may assert that a claim that includes items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the false claims statute;
- clearance or approval of product modifications to legally marketed devices that could significantly affect safety or effectiveness or that would constitute a major change in intended use;
- medical device reporting regulations, which require that a manufacturer report to the FDA if a device it markets may have caused or contributed to a death or serious injury, or has malfunctioned and the device or a similar device that it markets would be likely to cause or contribute to a death or serious injury, if the malfunction were to recur;
- correction, removal and recall reporting regulations, which require that manufacturers report to the FDA field corrections and product recalls or removals if undertaken to reduce a risk to health posed by the device or to remedy a violation of the FDCA that may present a risk to health;
- complying with the federal law and regulations requiring Unique Device Identifiers on devices and also requiring the submission of certain information about each device to the FDA's Global Unique Device Identification Database;
- the FDA's recall authority, whereby the agency can order device manufacturers to recall from the market a product that is in violation of governing laws and regulations if there is a reasonable probability that the use of the device would cause a serious, adverse health consequence or death; and
- post-market surveillance activities and regulations, which apply when deemed by the FDA to be necessary to protect the public health or to provide additional safety and effectiveness data for the device.

The FDA has broad regulatory compliance and enforcement powers. If the FDA determines that we failed to comply with applicable regulatory requirements, it can take a variety of compliance or enforcement actions, which may result in any of the following sanctions:

- warning letters, untitled letters, fines, injunctions, consent decrees and civil penalties;
- recalls, withdrawals, or administrative detention or seizure of our products;
- operating restrictions or partial suspension or total shutdown of production;

- refusing or delaying requests for 510(k) marketing clearance or PMA approvals of new products or modified products;
- withdrawing 510(k) clearances or PMA approvals that have already been granted;
- refusal to grant export or import approvals for our products; or
- criminal prosecution.

Regulation of Medical Devices in the EEA

There is currently no premarket government review of medical devices in the EEA. However, all medical devices placed on the market in the EEA must meet the relevant essential requirements laid down in Annex I of Directive 93/42/EEC concerning medical devices, or the Medical Devices Directive. The most fundamental essential requirement is that a medical device must be designed and manufactured in such a way that it will not compromise the clinical condition or safety of patients, or the safety and health of users and others. In addition, the device must achieve the performances intended by the manufacturer and be designed, manufactured and packaged in a suitable manner. The European Commission has adopted various standards applicable to medical devices. These include standards governing common requirements, such as sterilization and safety of medical electrical equipment, and product standards for certain types of medical devices. There are also harmonized standards relating to design and manufacture. While not mandatory, compliance with these standards is viewed as the easiest way to satisfy the essential requirements as a practical matter. Compliance with a standard developed to implement an essential requirement also creates a rebuttable presumption that the device satisfies that essential requirement.

To demonstrate compliance with the essential requirements laid down in Annex I to the Medical Devices Directive, medical device manufacturers must undergo a conformity assessment procedure, which varies according to the type of medical device and its classification. Conformity assessment procedures require an assessment of available clinical evidence, literature data for the product and post-market experience in respect of similar products already marketed. Except for low-risk medical devices (Class I non-sterile, non-measuring devices), where the manufacturer can self-declare the conformity of its products with the essential requirements (except for any parts which relate to sterility or metrology), a conformity assessment procedure requires the intervention of a Notified Body. Notified bodies are often separate entities and are authorized or licensed to perform such assessments by government authorities. The notified body would typically audit and examine a product's technical dossiers and the manufacturers' quality system. If satisfied that the relevant product conforms to the relevant essential requirements, the notified body issues a certificate of conformity, which the manufacturer uses as a basis for its own declaration of conformity. The manufacturer may then apply the CE Mark to the device, which allows the device to be placed on the market throughout the EEA. Once the product has been placed on the market in the EEA, the manufacturer must comply with requirements for reporting incidents and field safety corrective actions associated with the medical device.

In order to demonstrate safety and efficacy for their medical devices, manufacturers must conduct clinical investigations in accordance with the requirements of Annex X to the Medical Devices Directive, and applicable European and International Organization for Standardization standards, as implemented or adopted in the EEA member states. Clinical trials for medical devices usually require the approval of an ethics review board and approval by or notification to the national regulatory authorities. Both regulators and ethics committees also require the submission of serious adverse event reports during a study and may request a copy of the final study report.

On April 5, 2017, the European Parliament passed the Medical Devices Regulation (Regulation 2017/745), which repeals and replaces the EU Medical Devices Directive. Unlike directives, which must be implemented into the national laws of the EEA member States, the regulations would be directly applicable, i.e., without the need for adoption of EEA member State laws implementing them, in all EEA member States and are intended to eliminate current differences in the regulation of medical devices among EEA member States. The Medical Devices Regulation, among other things, is intended to establish a uniform, transparent, predictable and sustainable regulatory framework across the EEA for medical devices and ensure a high level of safety and health while supporting innovation.

The Medical Devices Regulation took effect on May 26, 2021. The new regulations among other things:

- strengthen the rules on placing devices on the market and reinforce surveillance once they are available;
- establish explicit provisions on manufacturers' responsibilities for the follow-up of the quality, performance and safety of devices placed on the market;
- improve the traceability of medical devices throughout the supply chain to the end-user or patient through a unique identification number;

- set up a central database to provide patients, healthcare professionals and the public with comprehensive information on products available in the European Union; and
- strengthen rules for the assessment of certain high-risk devices, such as implants, which may have to undergo an additional check by experts before they are placed on the market.

We are subject to regulations and product registration requirements in many foreign countries in which we may sell our products, including in the areas of:

- design, development, manufacturing and testing;
- product standards;
- product safety;
- product safety reporting;
- marketing, sales and distribution;
- packaging and storage requirements;
- labeling requirements;
- content and language of instructions for use;
- clinical trials;
- record keeping procedures;
- advertising and promotion;
- recalls and field corrective actions;
- post-market surveillance, including reporting of deaths or serious injuries and malfunctions that, if they were to recur, could lead to death or serious injury;
- import and export restrictions;
- tariff regulations, duties and tax requirements;
- registration for reimbursement; and
- necessity of testing performed in country by distributors for licensees.

The time required to obtain clearance required by foreign countries may be longer or shorter than that required for FDA clearance, and requirements for licensing a product in a foreign country may differ significantly from FDA requirements.

Regulation of Medical Devices in China

Depending on the product risk level, each imported medical device commercially marketed and distributed in China requires a notification to or a registration with China's National Medical Products Administration ("NMPA", formerly known as CFDA). Under the current Chinese Medical Device Regulation (State Council Order. #680, effective since 2017), medical devices are classified into one of three classes—Class I, Class II or Class III. Class I includes devices with lowest risks to patients, whose safety and effectiveness can be assured by general risk control mechanisms. Class I devices can be marketed in China through a notification to the NMPA. Class II includes devices with medium risks to patients and are under special control of the NMPA. Class III devices are those with high risks to patients, such as life-sustaining, life-supporting or implantable devices, and are under the most stringent regulatory control. Both Class II and Class III devices require a registration with the NMPA.

We initiated a product registration process in China for our Precision Flow systems, VTU and nasal interfaces in 2021. Our Precision Flow systems, VTU and nasal interfaces, which provide ventilatory support to neonatal and pediatric patients, as well as patients in EDs, ICUs, general care floors and LTACHs, are likely to be classified as Class II or Class III devices in China, subject to the NMPA's classification designation.

Before registering an imported Class II or Class III medical device with the NMPA, manufacturers are required to prepare the Product Technical Requirements (PTRs) that consist of performance specifications and testing methods specific to their products and in compliance with applicable Chinese device standards. Manufacturers must engage a NMPA-accredited laboratory to conduct an in-country type testing against the PTRs and applicable Chinese device standards. A type testing

process typically takes 3-6 months or longer. Under the current medical device regulations, imported medical devices must first be approved for marketing in their country of origin. Manufacturers are obligated to provide the appropriate documents (e.g. CE Mark, 510(k) letter, approved Premarket Approval Application) showing that the device has been approved for marketing in a country where the manufacturer is incorporated or the manufacturing site resides.

All of imported Class II and III devices are required to conduct local clinical trials in China unless (i) they are exempted from clinical trials under the Clinical Trial Exemption List published by the NMPA from time to time, (ii) manufacturers can demonstrate "substantial equivalence" to a predicate device currently on the market, or (iii) if there are overseas clinical study data or real world evidence that can prove product safety and effectiveness in Chinese patient populations. Clinical trials for some particular high risk devices are mandatory and need approval from the NMPA in advance. Clinical trials for other devices require a pre-notification to the NMPA. All registration trials must be approved by and conducted under the oversight of an Institutional Review Board, or Ethics Committee.

The NMPA, after receiving an application for registration, will have the Center for Medical Device Evaluation ("CMDE") review the application dossier and notify the applicant whether the application for registration is approved. The CMDE may require applicants to submit supplemental information (including clinical data and technical data) for its review. Applicants will be given 1 year to prepare and submit the required information. The CMDE's statutory time limit for technical review is 60 working days for Class II devices and 90 working days for Class III devices. Subject to specifics of a product, an approval process could take longer, and clearance is never guaranteed. Fast track or priority review pathways can be available for devices that are innovative, address urgent unmet clinical needs, or have significant clinical value.

After a device is approved by the NMPA for marketing, numerous and extensive regulatory requirements will apply post marketing authorization. These include but are not limited to:

- Completion of any post-approval studies that may be required by the NMPA upon its conditional approval; Renewal of the registration with the NMPA every 5 years since the initial registration;
- GMP compliance requirements, which require foreign manufacturers to follow stringent design, testing, control, documentation, complaint handling and other quality assurance procedures during all stages of the manufacturing process;
- Labeling, advertising and promotion requirements, which require that claims are truthful, non-misleading, and substantiated. Instructions for use should be clear to guide correct use of the products, and manufacturers are prohibited from unapproved or "off-label" uses;
- Medical device adverse event monitoring, reporting and re-evaluation obligations, which require a manufacturer to report to the NMPA if a device it markets may have caused or contributed to death or serious injury, would be likely to cause or contribute to death or serious injury, if malfunction were to recur; and
- Medical device recall obligations, which require that manufacturers to report to the NMPA any field corrections and product removals that are undertaken to reduce an unreasonable risk to health posed by the device or to remediate a violation of any applicable Chinese device standards, PTRs, or any applicable regulatory requirements that may present an unreasonable risk; the NMPA also has the authority to order a manufacturer to recall its product.

We will be subject to regular or fly-in inspections and market surveillance by the NMPA and its local counterparts to ensure continuous compliance with regulatory requirements. If the NMPA determines that we fail to comply with applicable regulatory requirements, it can take enforcement actions, which may result in any of the following sanctions:

- warning letters, corrective actions, fines;
- recalls, detention or seizure of our products, confiscation of illegal revenues;
- import alerts and bans;
- refusing to accept any future applications within a specific period of time;
- withdrawing any NMPA approvals that have already been granted; and
- Debarment of responsible persons from engaging in medical device-related business activities within a specific period of time.

The Chinese State Council passed new Medical Device Regulations, which replaced the previous Medical Device Regulations, effective June 1, 2021. The new Medical Device Regulations echo various regulatory reform initiatives unveiled by the NMPA in recent years with an aim to create a regulatory system that is conducive to device innovation. The new Medical Device Regulations reinforce post-approval compliance obligations and expect medical device marketing authorization holders to take primary responsibility for pre- and post-approval compliance. Additionally, the new Medical Device Regulations significantly increase penalties for all kinds of illegal actions, and introduce a dual penalty system, subjecting both companies and individual responsible persons to sanctions. This legislative development may result in the acceleration or delay of certain regulatory clearance or approval for our products in China.

Pricing, Contracting and Reimbursement

We believe our products are priced consistent with their value. In order to obtain or maintain business in the competitive respiratory therapy market, however, we have historically had to offer various discounts directly to purchasers or indirectly to purchasers through group purchasing organizations ("GPOs") or integrated delivery networks ("IDNs"), in accordance with applicable law. We have recently expanded the use of product discount offerings related to placed capital arrangements for our Precision Flow systems. Such bundled discount offerings involve the placement of capital equipment for use by the customer at no upfront charge in connection with the customer's ongoing purchase of disposable products. In addition, consistent with an increasing emphasis in the medical device and broader healthcare industry on payment based on value (so-called value-based pricing), we may enter into contracts with customers that guarantee performance of our Precision Flow systems by refunding costs of disposables (or providing replacement disposables) used on patients if treatment does not achieve specific patient outcomes. In response to pressure from competition or customers, we may have to offer enhanced discounts or enter into additional value-based contracting arrangements, which may adversely affect our revenue.

Health insurance coverage and adequate reimbursement of our products (or services provided using our products) is critical to the success of our business. Sales of our products will depend, in part, on the extent to which our products (or services provided using our products) will be covered and adequately reimbursed by third-party payors, such as government-sponsored health programs and private health plans.

Our products are used in providing services and are often reimbursed by third-party payors as part of a global payment that covers all costs associated with providing that service. Healthcare providers that use our products may therefore be responsible for costs incurred in providing the service that exceed reimbursement. If our products are priced higher than competitor products, including products used to provide alternative treatments, and we are unable to demonstrate that our products are nonetheless cost-effective, we may encounter obstacles in obtaining or maintaining business.

Third-party payors are increasingly reducing reimbursements for clinical products and services. Within the United States and abroad, the containment of healthcare costs has become a priority of federal and state governments. Limits on reimbursement available from governmental or private third-party payors may reduce the demand for, or negatively affect the price of those products, and could significantly harm our business, results of operations, financial condition and cash flows.

Federal, State and Foreign Fraud and Abuse and Physician Payment Transparency Laws

In addition to FDA restrictions on marketing and promotion of drugs and devices, other federal and state laws restrict our business practices. These laws include, without limitation, U.S. and foreign laws intended to prohibit or otherwise regulate activities that might result in fraud and abuse.

U.S. federal healthcare fraud and abuse laws generally apply to our activities because our products are covered under federal healthcare programs such as Medicare and Medicaid or, in some instances, private insurance. The principal U.S. federal healthcare fraud and abuse laws applicable to us and our activities include: (1) the Anti-Kickback Statute, which prohibits the knowing and willful offer, solicitation, payment or receipt of anything of value for patient referrals or the generation of business reimbursable by a federal health care program; (2) the False Claims Act, which prohibits the submission of false or otherwise improper claims for payment to a federally-funded healthcare program, including claims resulting from a violation of the Anti-Kickback Statute; and (3) healthcare fraud statutes that prohibit false statements and improper claims to any third-party payor. There are also similar state anti-kickback and false claims laws that apply to activities involving state-funded Medicaid and other healthcare programs as well as private third-party payors.

The Anti-Kickback Statute is particularly relevant because of its broad applicability. Specifically, the Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, offering, receiving, or providing anything of value, directly or indirectly, in exchange for, or to induce, either the referral of an individual, or the furnishing, arranging for or recommending a good or service for which payment may be made in whole or part under federal healthcare programs, such as the Medicare and Medicaid programs. Courts have interpreted the law to provide that a financial arrangement may violate this

law if any one of the purposes of an arrangement is to encourage patient referrals or other federal healthcare program business, regardless of whether there are other legitimate purposes for the arrangement. Statutory exceptions and regulatory safe harbors protect certain interactions if specific requirements are met. Failure to satisfy an exception or safe harbor does not necessarily mean that the Anti-Kickback Statute is violated; rather, the government will consider relevant facts and circumstances to determine whether the requisite intent for a violation is present and whether there is a low risk of fraud, waste, or abuse. Many interactions in which we commonly engage, such as the provision of business meals to healthcare practitioners, could implicate the Anti-Kickback Statute and are not protected by an exception or safe harbor. If the government determines that these activities are abusive, we could be subject to enforcement action. Penalties for Anti-Kickback Statute violations may include both criminal penalties such as imprisonment and civil sanctions such as fines and possible exclusion from Medicare, Medicaid, and other federal health care programs. Exclusion would mean that our products were no longer eligible for reimbursement under federal healthcare programs.

Laws and regulations have also been enacted by the federal government and various states to regulate the sales and marketing practices of medical device and pharmaceutical manufacturers. The laws and regulations generally limit and monitor financial interactions between manufacturers and healthcare providers; require pharmaceutical and medical device companies to comply with voluntary compliance standards issued by industry associations and the relevant compliance guidance promulgated by the U.S. federal government; and/or require disclosure to the government and/or public of financial interactions (so-called “sunshine laws”).

The healthcare laws and regulations applicable to us, including those described above, contain ambiguous requirements and are subject to evolving interpretations and enforcement discretion. Manufacturers must adopt reasonable interpretations of requirements if there is ambiguity and those interpretations could be challenged. If a governmental authority were to conclude that we are not in compliance with applicable laws and regulations, we and our officers and employees could be subject to severe criminal and civil financial penalties, including, for example, exclusion from participation as a supplier of product to beneficiaries covered by government payors. Any failure to comply with laws and regulations relating to reimbursement and healthcare goods and services could adversely affect our reputation, business, financial condition and cash flows.

To help ensure compliance with healthcare laws and regulations applicable to us, we have implemented a comprehensive compliance program based on the HHS Office of Inspector General’s Seven Fundamental Elements of an Effective Compliance Program. We adhere to, and the compliance program incorporates, standards consistent with voluntary compliance code standards adopted by the medical device industry to promote compliance with the federal Anti-Kickback Statute. Despite our compliance program, we cannot be certain that we have always operated in full compliance with all applicable healthcare laws.

Many foreign countries have similar laws relating to healthcare fraud and abuse. Foreign laws and regulations may vary greatly from country to country. For example, the advertising and promotion of our products is subject to EU Directives concerning misleading and comparative advertising and unfair commercial practices, as well as other EEA Member State legislation governing the advertising and promotion of medical devices. These laws may limit or restrict the advertising and promotion of our products to the general public and may impose limitations on our promotional activities with healthcare professionals.

Data Privacy and Security Laws

We are, or in the future may, become subject to various U.S. federal and state as well as foreign laws that protect the confidentiality of certain patient health information, including patient medical records, and restrict the use and disclosure of patient health information by healthcare providers.

Within the United States, our operations may be affected by the Health Insurance Portability and Accountability Act of 1996 as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, collectively, HIPAA, which impose obligations on certain “covered entities” (healthcare providers, health plans and healthcare clearinghouses) and certain of their “business associate” contractors with respect to safeguarding the privacy, security and transmission of individually identifiable health information (referred to as “Protected Health Information” or “PHI”). We are a business associate of HIPAA covered entities under some of our lines of business. In our business associate relationships, we must comply with applicable HIPAA requirements and the contractual terms of our business associate agreements with HIPAA covered entities. In addition, HIPAA may affect our interactions with customers who are covered entities or their business associates because HIPAA affects the ability of these entities to disclose PHI to us. Various states also have laws that regulate the privacy and security of personal information and so may affect our business operations. Most notably, in 2018, California passed into law the California Consumer Privacy Act (“CCPA”), which took effect on January 1,

2020 and imposed many requirements on businesses that process the personal information of California residents. Many of the CCPA's requirements are similar to those found in the European Union's General Data Protection Regulation (2016/679), or GDPR, including requiring businesses to provide notice to data subjects regarding the information collected about them and how such information is used and shared, and providing data subjects the right to request access to such personal information and, in certain cases, request the erasure of such personal information. The CCPA also affords California residents the right to opt-out of "sales" of their personal information. The CCPA contains significant penalties for companies that violate its requirements. It also provides California residents a private right of action, including the ability to seek statutory damages, in the event of a data breach involving their data. In addition to California, many states have laws that impose fines on entities that experience a data breach involving certain types of personal data or that permit consumers to bring private actions against parties that experience a breach involving their data.

European Data Privacy and Data Security

In the European Union, we may be subject to laws relating to our collection, control, processing and other use of personal data (i.e. data relating to an identified or identifiable individual) because we process personal data of our employees, customers, vendors and other third parties based in the European Union in relation to the operation of our business.

In the European Union, the data privacy regime applicable to us includes the GDPR and the E-Privacy Directive 2002/58/EC ("EPD"). We depend on a number of third parties to provide our services, a number of which process personal data on our behalf and are therefore considered our processors under the GDPR. With each such provider we enter into contractual arrangements to ensure that they only process personal data according to our instructions, and that they have sufficient technical and organizational measures in place to safeguard the data. Where we transfer personal data outside the EEA, we do so in compliance with the relevant data export requirements. We take our data protection obligations seriously as any improper disclosure, particularly with regard to our customers' sensitive personal data, could negatively impact our business and/or our reputation.

GDPR

The GDPR became applicable on May 25, 2018 and replaced the previous data protection regime which consisted of separate laws issued by each EU Member State, based on the EU Data Protection Directive. Unlike the Directive (which needed to be transposed at a national level), the GDPR is directly applicable in each EU Member State, resulting in a more uniform application of data privacy laws across the European Union. However, the GDPR does allow each Member State to implement laws which supplement the GDPR, causing some variation between EU Member States (for example, in connection with processing employee personal data and processing personal data for scientific purposes). The GDPR also provides that EU Member States may separately introduce further conditions, including limitations, to the processing of genetic, biometric or health data, which could limit our ability to collect, use and share personal data, or could cause our compliance costs to increase, ultimately having an adverse impact on our business. We need to ensure compliance with the supplemental laws in each jurisdiction where we operate, either through having an establishment or through offering goods or services to, or monitoring the behavior of, data subjects located in such jurisdiction.

The GDPR imposes accountability obligations requiring controllers and processors to maintain a record of their data processing and policies. It requires us, as a controller of personal data, to be transparent and to disclose to data subjects (being the individuals to whom the personal data relates), in a concise, intelligible and easily accessible form, how their personal information is used by us. It also imposes limitations on our retention of information, introduces requirements to pseudonymize (i.e., key-code) data, introduces mandatory data breach notification requirements and sets certain standards for controllers to demonstrate that they have obtained valid consent for certain data processing activities.

The requirements also state that personal data may only be collected for specified, explicit and legitimate purposes which have a legal basis set out in the GDPR and may only be processed in a manner consistent with those purposes. Personal data must also be adequate, relevant, and not excessive in relation to the purposes for which it is collected and protected using appropriate technical and organizational measures. In addition, personal data must not be transferred outside of the EEA unless certain steps are taken to ensure an adequate level of protection. The GDPR also requires that the data not be kept for longer than necessary to achieve the purposes for which it was collected. To the extent that we process, control or otherwise use sensitive data relating to individuals (for example, individuals' health or medical information, race or ethnicity), more stringent rules apply, limiting the circumstances and the manner in which we are legally permitted to process that data and transfer that data outside of the EEA. In particular, in order to process such data, an additional legal permission is required, such as explicit consent of the data subject to the processing.

Fines for non-compliance with the GDPR have the potential to be significant—the greater of EUR 20 million or 4% of our global annual revenue in the previous financial year.

EPD

The requirements laid down by the EPD have been transposed into the national laws of each EEA Member State since 2003. The requirements are particularly relevant when we send electronic direct marketing to individuals in the EEA or when we use cookies or similar technologies on our websites with respect to individuals located in the EEA and will usually require us to obtain consent from such recipients to carry out these activities. Although all EEA Member State national laws stem from the EPD, the laws differ by jurisdiction, sometimes significantly. We need to ensure compliance with the laws in each jurisdiction where we operate.

The European Union is in the process of replacing the EPD with an E-Privacy Regulation which, unlike the EPD which needed to be transposed into the national law of EEA Member States, will be directly applicable in each EEA Member State. The text of the new Regulation has not yet been finalized nor has an implementation date been set. We will continue to monitor the progress of the new Regulation and make necessary modifications to our practices as and when required.

Healthcare Reform

The United States and some foreign jurisdictions are considering, or have enacted, a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our products profitably. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality or expanding access. Current and future legislative proposals to further reform healthcare or reduce healthcare costs may limit coverage of or lower reimbursement for the procedures associated with the use of our products. The cost containment measures that payors and providers are instituting and the effect of any healthcare reform initiative implemented in the future could impact our revenue from the sale of our products.

For example, the Patient Protection an Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively, the Healthcare Reform Act, substantially changed the way in which healthcare is financed by both governmental and private insurers and affected medical device manufacturers significantly. The Healthcare Reform Act also provides incentives to programs that increase the federal government's comparative effectiveness research and implemented payment system reforms including a national pilot program on payment bundling to encourage hospitals, physicians and other providers to improve the coordination, quality and efficiency of certain healthcare services through bundled payment models. Additionally, the Healthcare Reform Act provided additional federal funding to state Medicaid programs that expanded eligibility for Medicaid programs and required individuals to obtain health insurance or pay a tax penalty.

There have been administrative, judicial and Congressional challenges to certain aspects of the Healthcare Reform Act, and we expect additional challenges and amendments in the future.

With respect to Congressional action, tax legislation enacted at the end of 2017 removed penalties for not complying with the individual mandate to carry health insurance effective in 2019. The Trump Administration also took executive actions to undermine or delay implementation of the Healthcare Reform Act. In January 2017, President Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the Healthcare Reform Act to waive, defer, grant exemptions from, or delay the implementation of any provision of the Healthcare Reform Act that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. It remains to be seen whether and how quickly the Biden administration may take executive action to accelerate the Healthcare Reform Act's implementation. In December 2018, a federal district court found the Healthcare Reform Act unconstitutional in its entirety because, once Congress repealed the individual mandate provision, there was no longer a basis to rely on Congressional taxing authority to support enactment of the law. On appeal, a federal appeals court held in December 2019 that the individual mandate portion of the Healthcare Reform Act was unconstitutional and left open the question whether the remaining provisions of the Healthcare Reform Act would be valid without the individual mandate. On June 17, 2021, the Supreme Court ruled that the states and individuals that brought the lawsuit challenging the ACA's individual mandate do not have standing to challenge the law, and accordingly, did not rule on the merits of the suit regarding whether the individual mandate was severable from the rest of the ACA. We expect additional state and federal healthcare reform measures to be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our products (or the services provided using our products) or additional pricing pressure. Future healthcare legislation could also have a significant impact on our business. Due to the uncertainties regarding the outcome of future healthcare reform initiatives and their enactment and implementation, however, we cannot predict which, if any, of the future reform proposals will be adopted or the effect such adoption may have on us.

In addition, other legislative changes have been proposed and adopted since the Healthcare Reform Act was enacted. For example, the Budget Control Act of 2011, among other things, included reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2029 unless additional Congressional action is taken.

Laws Relating to Foreign Trade

We are subject to various federal and foreign laws that govern our international business practices. These laws include the U.S. Foreign Corrupt Practices Act, or FCPA, which prohibits U.S. companies and their representatives from paying, offering to pay, promising, or authorizing the payment of anything of value to any foreign government official, government staff member, political party, or political candidate for the purposes of obtaining or retaining business, or to otherwise obtain favorable treatment or influence a person working in an official capacity. In many countries, the healthcare professionals we regularly interact with may meet the FCPA's definition of a foreign government official. Additionally, interactions with or on the part of our vendors or other agents may also implicate the FCPA. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect their transactions and to devise and maintain an adequate system of internal accounting controls. Compliance with the FCPA is expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, the FCPA presents unique challenges in the medical device industry, because, in many countries, hospitals are operated by the government, and doctors and other hospital employees are considered foreign officials.

Our international operations could also be subject to compliance with national laws of other countries, such as the United Kingdom Bribery Act of 2010, or the U.K. Bribery Act. The U.K. Bribery Act applies to any company "carrying on business" in the United Kingdom, irrespective of where the offending conduct occurs. The U.K. Bribery Act applies to bribery activities both in the public and private sector and prohibits the provision of an "advantage" intended to induce or reward "improper performance" of the recipient's function. The failure by a company to prevent third parties from providing a bribe on its behalf could also constitute an offense. Penalties under the U.K. Bribery Act include potentially unlimited fines for companies and criminal sanctions for corporate officers under certain circumstances.

There are also trade laws within the United States and in other regions that regulate the sale, purchase, import, export, re-export, transfer and shipment of goods, currency, products, materials, services and technology. Violations of these laws can lead to serious consequences, including substantial fines.

Other Regulations

We are also subject to numerous federal, state and local laws relating to such matters as safe working conditions, manufacturing practices, environmental protection, fire hazard control, and disposal of hazardous or potentially hazardous substances. We may incur significant costs to comply with such laws and regulations now or in the future.

Seasonality

Although we did not experience seasonality during 2020 or 2021 due to demand for our High Velocity Therapy technology during the COVID-19 pandemic, historically prior to COVID-19 we have experienced seasonality in our first and fourth quarters, and we expect this trend to continue. We have experienced and may in the future experience higher sales in the fourth quarter as a result of increased sales from hospitals nearing their fiscal year-end that have not fully utilized the funds allocated to purchases of our Precision Flow systems. In the first quarter of each year we have experienced and may in the future experience higher sales in direct correlation with the number of patients presenting with respiratory distress due to the severity of the flu season, especially in the Northern Hemisphere. We expect COVID-19 to be a permanent part of the respiratory landscape similar to the flu or RSV. While COVID-19 surges are unpredictable, we believe that these surges will be aligned to changes in seasons when individuals spend more time inside. Thus, we believe that COVID-19 will most likely impact the first and fourth quarters of the year.

Information about our Executive Officers

The following table sets forth the name, age, and position of each of our executive officers as of February 24, 2021.

Name	Age	Title
Joseph Army	58	President, Chief Executive Officer, and Director
John Landry	49	Senior Vice President, Chief Financial Officer, and Treasurer
Gregoire Ramade	52	Senior Vice President and Chief Commercial Officer
Brian Lawrence	52	Senior Vice President and Chief Technology Officer

Joseph Army has served as President, Chief Executive Officer and as a member of our board of directors since June 2012. Prior to joining Vapotherm, Mr. Army served as President and Chief Executive Officer of Salient Surgical Technologies, Inc. (formerly TissueLink Medical, Inc.), or Salient, since 2007. He first joined Salient in 1999 as Chief Financial Officer and Vice President of Finance. Prior to his time at Salient, he held various positions including Vice President of Finance and Supply Chain Operations for Westaim Biomedical from 1998 to 1999 and strategy consultant for Coopers & Lybrand LLP from 1991 to 1997. Mr. Army holds an MBA in finance from The Wharton School and a BA in history from the University of Rhode Island. He is certified in production and inventory management and is a certified public accountant (inactive status).

John Landry has served as Senior Vice President, Chief Financial Officer, and Treasurer since July 2020 and served previously as Vice President, Chief Financial Officer, Secretary and Treasurer since August 2012. Prior to joining Vapotherm, he held a number of leadership roles at Salient from 2004 to 2011, including VP Accounting & Controller and VP Global Business Development. Mr. Landry also served as Director of International Marketing at Medtronic Advanced Energy from 2011 to 2012, which acquired Salient in August 2011. Prior to his time at Salient, he served in various financial leadership roles at Bottomline Technologies from 2000 to 2004, Hussey Seating Company from 1997 to 2000 and Coopers & Lybrand LLP from 1994 to 1997. Mr. Landry currently serves on the board of Liberate Medical, Inc. Mr. Landry graduated summa cum laude from Bentley College with a BS in Accountancy and is a certified public accountant (inactive status).

Gregoire Ramade has served as Senior Vice President and Chief Commercial Officer since October 2020 and previously as Vice President, International Sales and Worldwide marketing since May 2016. Before joining Vapotherm, Mr. Ramade worked at Becton Dickinson Medical-Pharmaceutical Systems as Vice President of Global Marketing and Business Development from January 2013 to May 2016. He also held the positions of Senior Marketing Director Home Healthcare Solution at Philips Healthcare from 2010 to 2012, Marketing Director EMEA at Philips Respironics from 2005 to 2009 and Product Manager of Consumable Masks and Accessories at Philips Respironics from 2004 to 2005. Mr. Ramade holds a bachelor's degree in International Business with a minor in Economics from the American University of Paris and an MBA in International Business and Marketing from the Ecole Nationale des Ponts et Chausses School of International Management.

Brian Lawrence has served as our Senior Vice President and Chief Technology Officer since December 6, 2021. Prior to joining Vapotherm, Mr. Lawrence served as Chief Technology Officer & General Manager of Gravity Diagnostics, LLC, a diagnostics company, where he was responsible for technology and innovation programs across the company. Prior to joining Gravity Diagnostics, Mr. Lawrence served as Senior Vice President & Chief Technology Officer of Hillrom Holdings, Inc. ("Hillrom"), a medical device company, from 2010 to 2021. While at Hillrom, Mr. Lawrence was responsible for global technology and innovation teams of over 800 employees in seven countries and an annual budget of $150 million. He led a digital transformation for the company and created a new SaaS business valued at over $100 million. Prior to that position, he served as Chief Technology Officer of Life Support Solutions, a division of GE Healthcare, where he was responsible for global engineering teams of over 400 employees across the US, Europe, and Asia with a budget of over $70 million annually. Mr. Lawrence holds a Doctor of Philosophy, Electrical Engineering, from the Center for Research and Education in Optics and Lasers ("CREOL"), University of Central Florida, and a Master of Science, Electrical Engineering and a Bachelor of Science, Electrical Engineering from Massachusetts Institute of Technology.

Human Capital

Below are our core Guiding Principles which govern how we and our employees conduct business, prioritize, make decisions, and "work with one another:

- We Are A Team
- We Hire, Develop & Retain The Very Best People In the Medical Device Industry
- Customers and their Patients Are Our Total Focus
- We Have Clear, Direct and Respectful Communication With Everyone
- We Make & Keep Commitments
- We Deliver Consistently Superior Results Through Disciplined Planning & Execution

Recognizing the importance of our human capital, our Board of Directors, through the Compensation Committee, retains direct oversight of our human capital and oversees and reviews our culture and policies and strategies related to human capital management.

Employees

As of December 31, 2021, we had approximately 550 employees and contractors, consisting of approximately 510 full-time employees and contractors and approximately 40 part-time contractors. Of these 550 employees and contractors, 512 of them are located in the United States, 15 of them in the United Kingdom and nine of them in Germany. None of our domestic employees is subject to a collective bargaining agreement or represented by a trade or labor union. As of December 31, 2021, two of our international team members were subject to a collective bargaining agreement, comprised of two individuals retained through professional employment organizations. We believe our relationship with our employees is good.

Our Culture

As part of our corporate culture, we encourage our employees to make decisions, think outside the box and operate with flexibility and speed. To meet the rapidly growing needs of our Customers', our teammates often face tight deadlines requiring overtime or work outside of normal business hours. We seek to recognize and reward our teammates for these efforts by hosting social activities to help strengthen teams and allow for different departments to get together in a casual setting. We host all company monthly Town Hall Meetings where we share updates on team development, quality initiatives, and patient stories, and recognize employees for embodying our Guiding Principles. We've earned Business New Hampshire Magazine's "Best Company to Work For" recognition every year since the start of our involvement in the competition in 2016.

Code of Business Conduct and Professional Culture Principles

As part of our Mission, we are committed to conducting all of our business in a law-abiding and principled fashion and maintaining a professional culture. Each employee agrees to follow our Code of Business Conduct. We also understand that guidance is most impactful when teams have ownership in its creation, and to that end, our employees have established Professional Culture Principles, which are three bedrock principles that are universally applicable and help guide our employee decision-making. Our Professional Culture Principles are:

To achieve our shared Mission, we …

Actively seek and provide feedback,
Count on one another to act with integrity,
Treat everyone with respect.

Recognizing that our Professional Culture Principles and Code of Business Conduct may not address every situation our employees may encounter, other resources exist to assist our employees in their decision-making, including our management team and Professional Conduct hotline.

Employee Engagement

We provide all employees with the opportunity to share their opinions and feedback through a culture survey that is typically performed twice per year. Results of the survey are measured and analyzed to enhance the employee experience, promote retention, drive change, and leverage the overall success of our organization. Programs we have implemented in response to these surveys include monthly "Listening Lunches" hosted by our Chief Executive Officer and our Bright Idea Program where we solicit new ideas from employees to streamline processes, improve workflow and/or reduce costs.

Employee Development and Training

We recognize that successful execution of our strategy is dependent on attracting, developing and retaining top talent in all areas of the business. In furtherance of our Guiding Principle to Hire, Develop & Retain The Very Best People In the Medical Device Industry, we have an employee referral program to encourage our employees to help us to hire other talented individuals into the organization. We strive to hire the best fit for the role and for the team, and develop our existing employees in their current roles as well as preparing them for future roles within our company. On an annual basis, our Leadership Team participates in a talent review and succession planning exercise to identify organizational needs, development opportunities, and potential future leaders. This enables us to identify the resources and skill sets needed to meet our growth objectives. We perform quarterly employee evaluations and annual manager effectiveness evaluations where all team members provide input on how their leader is doing. We promote a continuous learning environment encouraging employees to attend relevant seminars and informational sessions and often refer tools for further development. We also offer monthly and yearly professional development opportunities to team members of all levels, including: Lab and Lecture for Leaders, Women's Leadership Group, Communication Workshops, Annual Companywide Training Week, New Leader Bootcamp and ESL Courses.

Employee Safety, Health and Wellness

We are committed to maintaining a safe workplace and promoting the health and wellness of our employees. We have implemented multiple safety programs and regularly perform safety hazard evaluations within our manufacturing facility. Throughout the COVID-19 pandemic, our employees have been our first and foremost focus as we implemented a number of measures to provide a safe work environment. As the COVID-19 pandemic unfolded in 2020, we quickly shifted to a fully remote work environment where possible, while field-based sales and clinical employees continued to support accounts, utilizing technology to engage with customers in virtual settings when physical access is prohibited. When allowed to go into hospital accounts, our field team was there to answer any customer request which often required urgently needed visits, education and deliveries at all hours of the day, night and weekend. Our team was there to support those on the front line of the COVID-19 pandemic in any way they could. During the initial months of the pandemic, when critical resources were sparse, we provided "Essential Bags" to our Production and Warehouse employees on a weekly basis filled with toilet paper, hand sanitizer and non-perishable food items to help make a stressful personal situation a bit easier for all.

With respect to health and wellness, we want our employees to be their best self and therefore provide them access to a variety of innovative, flexible and convenient health and wellness programs designed to support their physical and mental health. These include, among others, health savings and flexible spending accounts, flexible work schedules, family leave and care resources, an on-site wellness coach, fitness classes, stress management sessions, and employee assistance programs, such as our Breathe Easy Fund, which supports employees and their families through times of hardship by the utilization of employee-raised funds. During 2021, we encouraged employees to get a COVID-19 vaccine by sharing information on the process of how to register and voluntarily extended paid sick leave and expanded family and medical leave coverage under the Families First Coronavirus Response Act into mid-2021.

Compensation and Benefits

We provide competitive compensation and benefits to attract and retain superior talent. In addition to salaries, our compensation and benefits, which vary by country/region, are in place as part of our "Pay for Performance" culture and can include annual bonuses, commission programs, stock-based compensation awards, employee stock purchase plan, a 401(k) plan with employee matching opportunities, tuition assistance, among many others. We believe in perpetuating an ownership culture throughout our organization. To that end, today approximately 94% of our team has equity in our Company that they either were granted upon hire or earned through performance. Our compensation program also includes several recognition awards throughout the year, including a formal award ceremony during our Annual "Vapotherm Invests in People" Week where we recognize the Impact Player of the Year, Innovator of the Year and Disciplined Planning & Execution of the Year and provide the recipients with additional stock-based compensation, money towards a vacation and extra paid-time off days.

Diversity, Equity and Inclusion

In furtherance of our Professional Culture Principle to treat everyone with respect, we strive to create a diverse workplace in which all employees feel respected, valued and empowered to reach their full potential. We define diversity as the range of human differences, including but not limited to race, ethnicity, gender, gender identity, sexual orientation, age, social class, physical ability or attributes, religious or ethical values system, national origin, and political beliefs. We hold Diversity & Inclusion Roundtable sessions every other month both in person and virtually where we discuss different aspects of diversity and inclusion, why it is important to our business and how we can seek to further focus on it at Vapotherm. To facilitate diversity, we implement recruitment strategies to encourage diverse candidates to apply to positions for which they qualify.

Community Engagement

Throughout the year, we engage in community programs, such as our Care in the Air Day where our team is deployed to volunteer at local charitable organizations to give back to the local community. We give back to local families in need through our partnership with St. Vincent de Paul and New Hampshire Foster Care where we donate Thanksgiving baskets and Christmas gifts during the holidays. We also host our Annual Patient of the Year Celebration where Patient families are brought in from across the country and tell their story about how Vapotherm was able to help them. This event allows us to celebrate our Patients, as well as our great People who make, sell and develop our products, and demonstrates to our employees that their work with Vapotherm matters and impacts Patients and the greater community.

Available Information

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at *http://www.sec.gov*. Our SEC filings are also available under the Investor Relations section of our website at *www.vapotherm.com*. Our website and the information contained on or connected to that site are not incorporated into this Annual Report on Form 10-K.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information contained in this Annual Report on Form 10-K, including our financial statements and related notes herein, before deciding to invest in our common stock. If any of the events or developments described below were to occur, our business, prospects, operating results and financial condition could suffer materially, the trading price of our common stock could decline and you could lose all or part of your investment. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business.

Summary Risk Factors

The following is a summary of the material risks that could adversely affect our business, operations, and financial results.

Risks Related to Our Business

- We have incurred losses in the past and may not generate sufficient revenue to achieve or sustain profitability.
- Our future disposable product revenue is dependent on growth and utilization of our installed base.
- If clinicians are not willing to adopt our products, our business will be adversely affected.
- Our long-term growth depends on our ability to compete effectively and develop new products.
- We face intense competition and may be unable to compete successfully.
- We have limited experience in marketing and selling our next generation products and services.
- We depend upon successful clinical results to drive adoption of our products.
- Manufacturing a portion of the components of our products in-house involves risk.
- The COVID-19 pandemic has made our business difficult to predict and may in the future adversely affect our business.
- We may be subject to product liability damages that could exceed our insurance coverage.
- Our sales volumes, operating results and business are subject to seasonal and quarterly fluctuations.
- We bear the risk of warranty claims on our products.
- Because we are no longer an “emerging growth company” we will likely incur significant additional costs.
- Our effective tax rate may fluctuate and we may incur tax obligations in certain jurisdictions.
- Our ability to use our net operating loss carryforwards may be limited.
- If the quality of our products is unacceptable, our brand and reputation could suffer.
- Growth through acquisitions or investments in new businesses, products or technologies is risky.
- We may be unable to manage our anticipated growth effectively.
- Our strategy to become a complex lung disease patient management company, including our affiliation with RespirCare, may not be successful, presents unique business and regulatory risks, and requires competencies in areas where we have little or no experience.

Risks Related to Our Dependence on Others

- We rely on third-party distributors to market and distribute our products in certain jurisdictions.
- We rely on single source suppliers in certain cases and do not have long-term supply contracts, which is risky.
- The COVID-19 pandemic has required us to maintain high inventory levels in order to meet fluctuating and unpredictable customer demand and these higher inventory levels can consume resources, reduce cash flows and, in some instances, result in impairment charges.
- We rely on shipping carriers to deliver our products on a timely and cost efficient basis.
- We rely on our senior management team and our ability to attract and retain highly skilled employees.

Risks Related to Government Regulation

- We are subject to extensive government regulation, with which the failure to comply could harm our business.
- We may not receive the necessary authorizations to market our future products.
- If product modifications require 510(k) clearance or other authorizations, we may need to recall those products.
- The misuse or off-label use of our products could harm our reputation, business and operating results and subject us to penalties.
- Disruptions at the FDA and other government agencies could harm our business.

- The failure of our products to be manufactured per governmental regulations would harm our business.
- The failure of our products to work as intended would harm our reputation, business and operating results.
- The sale of our products depends on adequate governmental or third-party payor reimbursement.
- We face significant uncertainty in the industry due to government healthcare reform and other legislative action.
- Industry or customer consolidation could harm our business.
- U.S. or international legislative or regulatory reforms could harm our business.
- Our failure to comply with fraud and abuse, transparency, licensure and other laws could subject us to penalties.

Risks Related to Our International Operations

- Our international operations subject us to certain risks, including significant tariffs and other restrictions with doing business in China, and trade agreements, tax provisions, tariffs and economic sanctions, which could harm our business.
- Our use of foreign contract manufacturers involves risks.
- Our results may be impacted by changes in foreign currency exchange rates.
- We could be adversely affected by violations of the Foreign Corrupt Practices Act and similar anti-bribery laws.

Risks Related to Our Intellectual Property

- Intellectual property protection for our products is important to our competitive position.
- Our business and competitive position are dependent on maintaining the confidentiality of our trade secrets.
- Our brand name recognition is dependent on trademark and trade name protection.
- Intellectual property disputes, which are common in our industry, could harm our business.
- Our failure to comply with personal information laws could result in penalties and reputational damage.
- Patent law changes could diminish the value of our patents.
- Our competitive position is dependent on obtaining and maintaining patent protection, which is limited.
- Patent terms may be inadequate to protect our competitive position on our products for an adequate amount of time.
- We may not be able to adequately protect our intellectual property rights throughout the world.
- We may be subject to damages from trade secret or breach of non-competition/non-solicitation agreements.

Risks Related to Our Indebtedness and Need for Additional Capital

- Our substantial indebtedness involves risk and we may be unable to service, repay or refinance our debt when due.
- Our failure to comply with loan agreement covenants could harm our financial condition.
- Our loan agreement could restrict our operations and ability to respond to changes or to take certain actions.
- We may need to raise additional capital, which may not be available on reasonable terms or at all.

Risks Related to Our Common Stock

- The price of our common stock may be volatile and fluctuate substantially.
- Our public company status is expensive and time-consuming.
- We may be subject to securities litigation, which is expensive and could divert our management's attention.
- Our key stockholders and management could exercise influence over matters subject to stockholder approval.
- A significant portion of our outstanding shares may be freely sold into the public market.
- We do not anticipate paying any cash dividends on our common stock.
- If analysts do not publish research, or publish inaccurate or unfavorable research, our stock price could decline.
- Anti-takeover provisions in charter, bylaws and Delaware law may discourage an acquisition of us.
- Our charter has an exclusive forum provision, which could limit stockholder litigation.

General Risk Factors

- Our operations, and those of our suppliers and customers, are vulnerable to interruption or loss due to uncontrolled events.
- Disruptions in our information technology systems could harm our business.
- We have in the past and may in the future be subject to various litigation claims and legal proceedings.
- Employment litigation and unfavorable publicity could negatively affect our future business.
- Our insurance policies are expensive and protect us only from certain risks.

Risks Related to Our Business

We have incurred losses in the past and may be unable to achieve or sustain profitability in the future.

We have incurred net losses since our inception. We incurred net losses of $51.1 million, $51.5 million, and $59.8 million for the years ended December 31, 2019, 2020, and 2021, respectively. As a result of ongoing losses, as of December 31, 2021, we had an accumulated deficit of $376.7 million. We expect to continue to incur significant product development, regulatory, sales and marketing and other expenses. The net losses we incur may fluctuate significantly from quarter to quarter.

Since 2008, our revenue has been derived primarily from sales of our Precision Flow systems and associated disposable products. Going forward, we anticipate that our revenue will be primarily derived from a combination of our Precision Flow and next-generation High Velocity Therapy products and their associated disposable products, our Oxygen Assist Module, and our HGE products and services, which we have rebranded as Vapotherm Access. Our Oxygen Assist Module launched in the United Kingdom, select European markets, and Israel in late 2020, and we are in the process of seeking FDA approval to market this product in the United States. However, demand for these products and services may decline or may not increase as quickly as we expect, or, in the case of new or next-generation products and services, may never materialize. Our ability to generate revenue from sales of our existing products and services, or from any products and services we may develop in the future, may not be sufficient to enable us to transition to profitability and generate positive cash flows.

We expect that our operating expenses will continue to increase as we continue to expand our sales and marketing organization, develop, enhance and commercialize new products and incur additional operational costs associated with being a public company. As a result, we expect to continue to incur operating losses for the foreseeable future and may never achieve profitability. Furthermore, even if we do achieve profitability, we may not be able to sustain or increase profitability on an ongoing basis. If we do not achieve or sustain profitability, it will be more difficult for us to finance our business and accomplish our strategic objectives, either of which would have a material adverse effect on our business, financial condition and results of operations and cause the market price of our common stock to decline. In addition, failure of our High Velocity Therapy technology or our Oxygen Assist Module, to significantly penetrate existing or new markets would negatively affect our business, financial condition and results of operations.

Historically, our revenue is primarily generated from sales of the disposable products utilized with our Precision Flow systems, and we are therefore highly dependent on growth and utilization of the installed base of those systems, and next generation versions of such systems, for our success.

We began selling our High Velocity Therapy technology and our Precision Flow Plus systems in the United States and in select international markets in 2018 and 2017, respectively. Sales of our Precision Flow systems and associated disposable products accounted for substantially all of our revenue for the years ended December 31, 2020 and 2021. We expect that sales of our High Velocity Therapy systems, our Oxygen Assist Module, and their associated disposable products will continue to account for the majority of our revenue going forward. Our ability to execute our growth strategy and become profitable will therefore depend upon the adoption by clinicians and customers, among others, of our High Velocity Therapy systems to treat both type I (hypoxic) respiratory distress, where patients do not receive sufficient oxygen, such as is experienced by COVID-19 patients, and type II (hypercapnic) respiratory distress, where patients are unable to clear sufficient carbon dioxide, such as is experienced by patients suffering from COPD, and of our Oxygen Assist Module to help maintain the pulse oxygen saturation, or SpO2, within the target SpO2 range over a significantly greater proportion of time while requiring significantly fewer manual adjustments to the equipment. Some clinicians may not adopt High Velocity Therapy because they have prior experience with, or a preference for, other treatment options that are more established, such as NiPPV, or may be reluctant to alter their practice patterns and undergo the training required to enable them to treat patients with High Velocity Therapy. Some customers may decide to not purchase our High Velocity Therapy systems if, among other potential reasons, they believe our pricing is too high or that alternative devices to manage respiratory therapy are either more clinically efficacious or more cost effective than our product. For example, our Precision Flow systems are significantly more expensive than conventional heated humidified oxygen delivery devices.

If clinicians are not willing to adopt our High Velocity Therapy systems to treat respiratory distress or our Oxygen Assist Module to help maintain oxygen levels within a targeted range, these products may fail to gain increased market acceptance, and our business will be adversely affected.

We expect to grow our revenue by driving increased adoption of our High Velocity Therapy systems to treat spontaneously breathing patients of all ages suffering from respiratory distress and of our Oxygen Assist Module to help clinicians maintain oxygen levels within a targeted range. While the number of clinicians adopting High Velocity Therapy has

increased in recent years, there is a significant subset of clinicians who have not adopted High Velocity Therapy, and may never do so, for a number of reasons, including:

- our inability to obtain key opinion leader support for High Velocity Therapy as a sound therapeutic option for treatment of both type I and type II respiratory distress;
- our inability to persuade hospitals and clinicians that High Velocity Therapy is a sound therapeutic option for treatment of both type I and type II respiratory distress;
- our inability to convince current customers to acquire additional equipment;
- perceived inadequacy or unavailability of clinical evidence supporting the benefits or cost-effectiveness of High Velocity Therapy over existing alternatives;
- liability risks generally associated with the use of new products and procedures;
- the training required to use new products;
- inadequate product quality; and
- perceived high cost.

Few clinicians have adopted our Oxygen Assist Module for use with our Precision Flow systems, in part because we only launched our Oxygen Assist Module in the United Kingdom, select European markets, and Israel in late 2020 and are presently seeking FDA approval of this technology in the United States. Clinicians may choose not to adopt our Oxygen Assist Module for similar reasons that clinicians may not adopt High Velocity Therapy systems.

Clinicians, including physicians and other medical professionals such as nurses and respiratory therapists, historically utilize NiPPV to treat patients in respiratory distress, and manual control to maintain oxygen levels within a targeted range. We believe that educating clinicians about the clinical and economic merits and patient benefits of our High Velocity Therapy technology as a viable alternative treatment for both type I and type II respiratory distress and our Oxygen Assist Module to help clinicians maintain oxygen levels within a targeted range are key elements for increasing the adoption of our High Velocity Therapy systems and Oxygen Assist Module. If additional clinicians do not adopt, or existing customers cease using our High Velocity Therapy systems or Oxygen Assist Module for any reason, including those listed above, or if we are unable to expand the use of our systems to treat both type I and type II respiratory distress, our ability to grow our revenue will be impaired, and our business may be adversely affected.

We are presently not profitable, and we may be unable to generate sufficient revenue to achieve and sustain profitability.

We will need to generate significant additional revenue to achieve and sustain profitability, and even if we achieve profitability, we cannot be sure that we will remain profitable for any period of time. Our failure to achieve or maintain profitability could negatively impact the value of our common stock. In order to successfully commercialize and derive revenue from our products and services, we will need to continue to expand our marketing efforts to develop new relationships and expand existing relationships with customers, to obtain authorization to market our products in additional countries, to achieve and maintain compliance with all applicable regulatory requirements, to develop and commercialize our products with new features or for additional indications, and develop or acquire new products. If we fail to successfully commercialize our products, we may never receive a return on the substantial investments we have made in product development, sales and marketing, regulatory compliance, manufacturing and quality assurance, as well as further investments we intend to make, which may cause us to fail to generate revenue and gain economies of scale from such investments.

In addition, potential customers may decide not to purchase our products, or our customers may decide to cancel orders due to changes in available care offerings, adverse clinical outcomes, inadequate reimbursement or productivity credits for procedures using our products, complications with manufacturing or the utilization of technology developed by other parties, all of which are circumstances outside of our control.

Further, demand for our products may not increase as quickly as we predict, and we may be unable to increase our revenue to the level that we currently expect. Even if we succeed in increasing adoption of our products by physicians, hospitals and other healthcare providers, maintaining and creating relationships with our existing and new customers and developing and commercializing new features or indications for these systems, we may be unable to generate sufficient revenue to achieve or sustain profitability.

Our long-term growth depends on our ability to compete effectively in the respiratory market by commercializing our products and services currently in development as well as developing and commercializing new products and services through our research and development efforts.

Given the competitiveness of our industry, our future business prospects depend in part on our ability to develop and commercialize new products and services, such as Vapotherm Access, and new applications for products that offer improved performance and cost-effectiveness. New technologies, techniques, products or services could emerge from competitors that might offer better combinations of price and performance than our products and services. It is important that we anticipate changes in technology and market demand, as well as physician, hospital and healthcare provider preferences and practices, in order to successfully commercialize new technologies to meet our prospective customers' needs on a timely and cost-effective basis.

We might be unable to successfully commercialize our products and services or obtain the necessary authorizations to do so. The success of any new product or service offering, or enhancement to an existing product or service, will depend on numerous factors, including our ability to:

- properly identify and anticipate clinician and patient needs;
- identify, retain, and manage third-party design and development firms where appropriate to accelerate development;
- develop and introduce new products and services, or enhancements to such, in a timely manner;
- adequately protect our intellectual property and avoid infringing upon the intellectual property rights of third parties;
- obtain and retain third-party licenses required for the development, commercialization, and/or utilization of new products;
- demonstrate the safety and efficacy of new products and services;
- obtain the necessary regulatory authorizations to market new products and services or enhancements to such; and
- deliver products at a price point that is both profitable and acceptable to the market.

If we do not develop and obtain regulatory authorization to market new products and services, or enhancements to such, in time to meet market demand, or if there is insufficient demand for these products, services or enhancements, our results of operations will suffer. Our internal research and development efforts and our outsourced third-party design and development initiatives may require a substantial investment of time and resources before we are adequately able to determine the commercial viability of a new product, service, technology, material or other innovation. In addition, even if we are able to develop enhancements or new generations of our products and services successfully, these enhancements or new generations of products or services may not produce revenues in excess of the costs of development or may quickly be rendered obsolete by changing customer preferences or the introduction of competitive products or services embodying new technologies or features.

Additionally, we must carefully manage our introduction of new products and services. If potential customers believe our new products or services will offer enhanced features or be sold for a more attractive price, they may delay purchases until such products or services are available. We may also have excess or obsolete inventory as we transition to new products, and we have limited experience in managing product transitions

We face intense competition and, if we are unable to compete successfully with such competition, our revenue, market share and financial results could be adversely affected.

The medical device industry generally and the respiratory market specifically, are characterized by intense competition and evolving industry standards. We compete with a number of manufacturers of non-invasive ventilation products for the treatment of respiratory distress, and on a secondary basis, with conventional heated humidified high flow oxygen devices that facilitate high flow oxygen delivery for hypoxemic patients. To a lesser extent, we compete with providers of other respiratory support solutions to enhance oxygen delivery such as non-rebreather masks and oxygen cannulas.

Our most significant NiPPV manufacturing competitor is Philips Respironics. Conventional heated humidified high flow oxygen device manufacturers, such as Fisher & Paykel Healthcare and Masimo Corporation, are also potential

competitors. In addition, some NiPPV and ventilator companies, including Philips Respironics, offer high flow oxygen delivery options on their NiPPV and mechanical ventilator systems. We expect that the market will become increasingly competitive in the future. Manufacturing companies compete for sales to providers primarily on the basis of product features, service and price.

HGE, which we have rebranded as Vapotherm Access, competes in the technology enabled services and digital health industries, where some of its competitors include Livongo Health Inc., Vivify Health Inc., Propeller Health Inc., Conversa and Spire Health Inc.

Many of our competitors are large, well-capitalized companies with greater resources, more products and a longer history in the respiratory care market than we have. Other competitors are smaller companies who have or in the future may benefit from a strategic investment or acquisition by one of our larger competitors. Our larger competitors are able to spend more aggressively on product development, marketing, sales and other product initiatives than we can. Some of these competitors have:

- significantly greater name recognition;
- established relationships with healthcare professionals and customers including group purchasing organizations and integrated delivery networks;
- established distribution networks;
- additional lines of products, and the ability to offer rebates or bundle products to offer higher discounts or other incentives to gain a competitive advantage;
- greater history in conducting research and development, manufacturing, marketing and obtaining regulatory approval for respiratory support products; and
- greater financial and human resources for product development, sales and marketing, patent litigation and customer financing.

Many of our competitors have significant development and clinical resources and can rapidly follow any innovations we bring to the marketplace. For example, our competitors could seek to obtain 510(k) clearance for expanded labeling of their products using our current or future High Velocity Therapy technology products as predicate devices. Even if our technology and business strategy is more effective than the technology and business strategy of our competitors, current or potential customers might accept competitor products and services in lieu of purchasing our products. We anticipate that we will face increased competition in the future as existing companies and competitors develop new or improved products and business strategies and as new companies enter the market with new technologies and business strategies. We may not be able to compete effectively against these organizations. Increased competition in the future could adversely affect our revenue, market share and financial results.

We have limited experience in directly marketing and selling our products in international markets, and if we are unable to successfully expand our international direct sales infrastructure and adequately address our customers' needs, it could negatively impact sales and market acceptance of our products in international markets and we may never generate sufficient revenue to achieve or sustain profitability.

We have limited experience directly marketing and selling our products in international markets. In the United Kingdom, we acquired our former distributor, Solus Medical Limited, on February 28, 2019, and we have converted this market to a direct sales model. Additionally, we established a direct sales model in Germany in 2021. We have no experience directly marketing and selling our products in other international countries. As in the United States, our operating results in international markets are dependent upon our sales and marketing efforts in those countries, and if we fail to adequately promote and market our products, our sales in those countries could significantly decrease.

We have limited experience marketing and selling Vapotherm Access as a chronic respiratory disease management platform or selling value-based patient management arrangements to hospitals and payors, and no prior experience affiliating directly with a medical practice such as RespirCare or offering products or services that may be directly reimbursable to us by payors.

In addition, our future sales will largely depend on our ability to increase our sales and marketing efforts to adequately address our customers' needs. We believe it is necessary to utilize a sales force that incorporates a specialized group consisting of former respiratory therapists who have experience with our High Velocity Therapy products to support our customers' needs. Competition for sales representatives and marketing employees is intense and we may be unable to attract and retain sufficient personnel to maintain an effective sales and marketing force. If we are unable to adequately address our customers'

needs, it could negatively impact sales and market acceptance of our products, and we may not generate sufficient revenue to achieve or sustain profitability.

As we launch new products and increase our marketing efforts with respect to our High Velocity Therapy systems, Oxygen Assist Module and Vapotherm Access, we have expanded and potentially will need to continue to expand or restructure our marketing and sales networks, as well as modify and improve our sales program offerings, such as, for example, our provision of bundled discounts involving the placement of Precision Flow capital units at no upfront charge in connection with the customer's ongoing purchases of disposable products. If the percentage of customers who acquire our technology in this manner increases relative to the percentage of customers who purchase our High Velocity Therapy systems through an upfront or financed payment, the percentage of our revenue derived from High Velocity Therapy systems may decrease. Our future success will depend largely on our ability to continue to hire, train, retain and motivate skilled sales representatives and clinical educators, and on ensuring our sales programs satisfy the needs of our customers. New sales hires require training and take time to achieve full productivity. If we fail to train new sales hires adequately, if we experience high turnover in our sales force in the future, or if our sales program offerings do not satisfy the needs of our customers, new hires may not become as productive as may be necessary to maintain or increase our sales. As a result, we may be required to restructure our sales organization, which would be costly, divert management attention, and lead to both planned and unplanned turnover. If we are unable to appropriately expand our sales and marketing capabilities and educational initiatives domestically and internationally, we may be unable to effectively commercialize our products.

Supporting our products with clinical evidence is a key element of our strategy. We conduct and plan to conduct a range of nonclinical, as well as clinical trials, comparative effectiveness, economic and other studies of our products. Our clinical trial efforts have been hampered by the difficulty in recruiting patients and clinicians to participate in such studies during the COVID-19 pandemic. Inability to complete clinical studies in a timely fashion, or unfavorable results from these trials or studies or from similar trials or studies conducted by others may negatively affect the use or adoption of our products by physicians and hospitals, which could have a negative impact on the market acceptance of these products and their profitability.

We expect to continue to expand our marketing programs in the United States and internationally, and to fund research and development activities, including additional investment in sponsored and investigator initiated clinical and nonclinical trials and studies. The purpose of these nonclinical and clinical trials and studies is to obtain clinical efficacy, economic, and comparative effectiveness information about our products in an effort to generate comprehensive clinical and real-world outcome and cost effectiveness data in order to obtain product approval and drive further penetration in the markets we serve. In the event that these trials and studies, or similar trials and studies conducted by others, are slowed due to the COVID-19 pandemic or for other reasons, or yield unfavorable results, particularly those in which we target severely hypercapnic patients, those results or delays could negatively affect the use or adoption of our products by hospitals and clinicians, or the reimbursement for our products by payors, thereby compromising market acceptance and profitability.

We currently manufacture our products, and some components of our products, in-house, and expect to continue to do so in the future, and the inability to produce the products or components we manufacture in-house could cause significant production delays, an inability to meet customer demand and a concomitant loss in revenue.

We currently manufacture our products and some components of our products, in-house. As a result, we are dependent upon the uninterrupted and efficient operation of our manufacturing facility in Exeter, New Hampshire. The operations at this facility may be disrupted by a number of factors, including:

- delivery problems;
- inability to hire and retain manufacturing personnel;
- financial condition or results of operations;
- internal inefficiencies;
- manufacturing equipment failure;
- severe weather;
- fire;
- nature or man-made disasters;

- work stoppages;
- labor shortages;
- component shortages; and
- FDA compliance or other quality-related issues.

There can be no assurance that the occurrence of these or any other operational problems at our facility would not cause significant production delays, an inability to meet customer demand and a concomitant loss in revenue. In addition, if any of these events occur at our Exeter, New Hampshire facility, we may need to engage contract manufacturers to assist us in manufacturing our products or product components. To this end, we recently engaged a third-party manufacturer to manufacture and assemble certain of our products at its facility in Tijuana, Mexico.

Several of our components are sole source from either our own internal processes or outside suppliers. These sole source components have no immediate alternate supply channels. If we were to encounter a disruption in supply, we may not be able to find an alternate supplier or enter into a new manufacturing and supply agreement. A failure to find an alternate supplier or enter into a new manufacturing and supply agreement could result in an inability to manufacture our products and cause substantial loss in revenue.

A pandemic, epidemic or outbreak of an infectious disease, such as COVID-19, has and may in the future adversely affect our business.

If a pandemic, epidemic or outbreak of an infectious disease occurs, our business may be adversely affected. Such events may result in a period of business, manufacturing, and other disruption or, as in the case of the COVID-19 pandemic, the need to rapidly scale our production to meet increased demand in a cost-effective manner, or the inability to do so, any of which could materially affect our business, financial condition and results of operations. For example, the COVID-19 resulted in certain disruptions to our business during 2021 and may in the future cause additional disruptions. Examples of such disruptions include without limitation the following:

- The health and wellbeing of our employees, including our operations and production teams, our sales representatives and our clinical educators who may be diagnosed with COVID-19 and unable to work, or who may be placed in quarantine due to potential exposure to COVID-19, or who may need to care for family members diagnosed with COVID-19, and in each case such developments may result in significant business disruption.
- Limited access to hospitals, clinicians and other customers, and to key component vendors, due to COVID-19 related access restrictions, resulting in reduced sales and clinical education opportunities and a limited ability to collaborate on technical matters.
- The need to place additional demands on our employees during periods of high demand for our products, potentially resulting in burn-out, fatigue, mistakes, re-work and excess turnover. The need to make rapid changes to processes while maintaining compliance with our quality systems and other regulatory requirements.
- Fluctuations in demand potentially leading to volatility in our operations and supply chain and difficulty in planning and predicting our business and our inventory levels.

  Supply chain disruptions, freight delays and shipping and component price increases as our vendors and carriers experience many of the same issues we experience.
- Restrictions imposed in international markets which could restrict or delay our ability to ship product into those markets and service our customers there.
- Difficulty in retaining and recruiting employees due to pandemic related restrictions and government payments.
- Inability to raise capital or comply with debt covenants due to COVID-19 related volatility caused by the items listed above.

In addition, demand for our products and services is likely to decrease as the COVID-19 pandemic subsides and hospitals deploy less of their budgets to acquiring additional respiratory equipment due to significant inventories already on hand because of increased purchases during the pandemic.

The full extent to which the COVID-19 pandemic impacts our business will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of COVID-19 and the actions taken to treat or contain COVID-19 or to otherwise limit its impact, and the continuing

effectiveness of vaccines among others. Additionally, strategies relating to limiting the impact of COVID-19 have become highly politicized around the world. To the extent the COVID-19 pandemic, whether on its own or in connection with any political, economic, and civil instability adversely affects our business and financial results, our distributors' and suppliers' business and financial results, or our customers' business and financial results, it may also have the effect of heightening many of the other risks described in this "Risk Factors" section, including without limitation those relating to our ability to generate revenue and improve on or hold our current gross margin, the price of our common stock, our susceptibility to securities or other types of litigation, our significant amount of indebtedness, our need to generate sufficient cash flows to service our substantial indebtedness, and our ability to comply with the covenants contained in the agreements that govern our indebtedness.

If product liability lawsuits are brought against us, our business may be harmed, and we may be required to pay damages that exceed our insurance coverage.

Our business exposes us to potential product liability claims that are inherent in the testing, manufacture and sale of medical devices for respiratory support. Furthermore, if our customers are not sufficiently trained in the use of our products, they may misuse or ineffectively use our products, which may result in unsatisfactory patient outcomes or patient injury. We could become the subject of product liability lawsuits alleging that component failures, malfunctions, manufacturing flaws, design defects or inadequate disclosure of product-related risks or product-related information resulted in an unsafe condition or injury to patients.

Regardless of the merit or eventual outcome, product liability claims may result in:

- decreased demand for our products;
- injury to our reputation;
- significant litigation costs;
- substantial monetary awards to or costly settlements with patients;
- product recalls;
- material defense costs;
- loss of revenue;
- the inability to commercialize new products; and
- diversion of management attention from pursuing our business strategy.

Our existing product liability insurance coverage may be inadequate to protect us from any liabilities we might incur. If a product liability claim or series of claims is brought against us for uninsured liabilities or in excess of our insurance coverage, our business could suffer. Any product liability claim brought against us, with or without merit, could result in the increase of our product liability insurance rates or the inability to secure coverage in the future. In addition, a recall of some of our products, whether or not the result of a product liability claim, could result in significant costs and loss of customers.

In addition, we may be unable to maintain insurance coverage at a reasonable cost or in sufficient amounts or scope to protect us against losses. Any claims against us, regardless of their merit, could severely harm our financial condition, strain our management and other resources and adversely affect or eliminate the prospects for commercialization or sales of a product that is the subject of any such claim.

Our sales volumes and our results of operations may fluctuate within each quarter and over the course of the year.

We have experienced and continue to experience meaningful variability in our sales and gross profit among quarters, as well as within each quarter, as a result of a number of factors, which may include, among other things:

- the number of products sold in the quarter;
- the unpredictability of sales of capital equipment to our domestic hospital customers and our international distributors;
- timing of our customers' capital budgeting cycle; and
- fluctuation and foreign currency exchange rates.

The foregoing factors are difficult to forecast, and these, as well as other factors, could materially and adversely affect our results of operations. In addition, a significant amount of our operating expenses are relatively fixed due to our manufacturing, research and development and sales and general administrative efforts. Any failure to adjust spending quickly enough to compensate for a revenue shortfall could magnify the adverse impact of such revenue shortfall on our results of operations. Our results of operations may not meet the expectations of research analysts or investors, in which case the price of our common stock could decrease significantly.

Historically, our business has been, and likely again in the future will be, subject to seasonal fluctuations.

Although we did not experience seasonality this year due to demand for our High Velocity Therapy technology during the COVID-19 pandemic, historically, our business has been, and likely again in the future will be, subject to seasonal fluctuations in that our revenue is typically higher in our first and fourth quarters, driven primarily by an increase in patients with flu-like symptoms and COPD exacerbations. Sales volume can be affected by the severity of the flu season and variations in the rates of respiratory disease in any given time period. In the event we had product shortages or had to institute a recall of our products during the flu season, our financial results would have an even more detrimental effect. As a result, our financial results for any single quarter or for periods of less than a year are not necessarily indicative of the results that may be achieved for a full fiscal year.

We bear the risk of warranty claims on our products.

We provide customers with a one-year warranty on our Precision Flow systems' capital purchases, with limited exceptions. For the years ended December 31, 2019, 2020 and 2021, we incurred warranty expense of $0.1 million, $0.6 million, and $0.2 million, respectively. We bear the risk of warranty claims on the products we supply. We may not be successful in claiming recovery under any warranty or indemnity provided to us by our suppliers or vendors in the event of a successful warranty claim against us by a customer or any recovery from such vendor or supplier may not be sufficient to cover our losses. In addition, warranty claims brought by our customers related to third-party components may arise after our ability to bring corresponding warranty claims against such suppliers expires, which could result in our inability to recover any costs incurred by us.

We no longer qualify as an "emerging growth company" as of December 31, 2020 and as a result, we have and will continue to incur significant additional costs.

As of December 31, 2020, we no longer qualified as an "emerging growth company," and the reduced disclosure requirements applicable to emerging growth companies no longer applied to us. As a result, we are no longer permitted to take advantage of the reduced regulatory and reporting requirements afforded to emerging growth companies. Accordingly, we will likely incur additional expenses and devote substantial management effort toward ensuring compliance with those additional requirements, including the auditor attestation requirements for internal controls. Compliance with these additional laws, rules and regulations will likely increase our legal and financial compliance costs, make some activities more difficult, time consuming or costly and increase demand on our systems and resources. In addition, management's attention may be diverted from other business concerns and our costs and expenses will increase, which could harm our business and operating results. We may also need to hire more employees in the future or engage additional outside consultants to comply with these requirements, which would increase our costs and expenses.

Our effective tax rate may fluctuate, and we may incur obligations in tax jurisdictions.

We are subject to taxation in numerous U.S. states, the United Kingdom and certain other territories. As a result, our effective tax rate is derived from a combination of applicable tax rates in the various places that we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each of such places. Nevertheless, our effective tax rate may be different than experienced in the past due to numerous factors, including changes in tax laws, changes in the mix of our profitability from state to state or jurisdiction to jurisdiction, the results of examinations and audits of our tax filings, our inability to secure or sustain acceptable agreements with tax authorities, and changes in accounting for income taxes. Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations and may result in tax obligations in excess of amounts accrued in our financial statements.

If we become profitable, our ability to use our net operating loss carryforwards to offset future taxable income may be subject to limitations.

We have incurred net losses since our inception, and expect to continue to incur significant product development, clinical and regulatory, sales and marketing and other expenses as well as increased administrative expenses. If we become profitable in the future, our ability to use our net operating loss carryforwards, or NOLs, tax credit carryforwards and other tax attributes to offset future taxable income or reduce taxes may be subject to limitations. In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or Code, a corporation that undergoes an "ownership change" is subject to an annual limitation on its ability to use its pre-change NOLs and other tax attributes. We have not performed an analysis to determine whether our past issuances of stock and other changes in our stock ownership may have resulted in one or more ownership changes within the meaning of Section 382 of the Code. In addition, future changes in our stock ownership, some of which are outside of our control, could result in one or more ownership changes under Section 382 of the Code. If an ownership change has occurred in the past or occurs in the future, our ability to use our pre-change NOLs and other tax attributes may be subject to limitation under Section 382 of the Code. If we determine that we have not undergone an ownership change, the Internal Revenue Service could challenge our analysis, and determine that our ability to use our NOLs, tax credit carryforwards or other tax attributes to offset taxable income are limited by Section 382 of the Code. For these and other reasons, we may not be able to use a material portion of the NOLs, even if we attain profitability. A full valuation allowance has been provided for the entire amount of our NOLs.

If the quality of our products does not meet the expectations of our customers or their patients, then our brand and reputation could suffer, and our business could be adversely impacted.

In the course of conducting our business, we must adequately address quality issues that may arise with our products, as well as defects in third-party components included in our products. Although we have established internal procedures to minimize risks that may arise from quality issues, we may be unable to eliminate or mitigate occurrences of these issues and associated liabilities.

Additionally, if our products are involved in an instance of patient harm, even if it is through misuse of our products, it could result in an interruption of business and damage to our reputation.

We may seek to grow our business through acquisitions or investments in new or complementary businesses, products or technologies, through the licensing of products or technologies from third parties or other strategic alliances. The failure to effectively manage acquisitions, investments, licenses or other strategic alliances, or the failure to integrate them with our existing business, could have a material adverse effect on our operating results, dilute our stockholders' ownership, increase our debt or cause us to incur significant expense.

Our success depends on our ability to continually enhance and broaden our product offerings in response to changing customer demands, competitive pressures, technologies and market pressures. Accordingly, from time to time we may consider opportunities to acquire, make investments in or license other technologies, products and businesses that may enhance our capabilities, complement our current products or expand the breadth of our markets or customer base. For example, on February 28, 2019, we acquired our former distributor in the United Kingdom, Solus Medical, providing us with a U.K.-based wholly owned subsidiary and direct sales organization. As another example, on November 13, 2020 we acquired HGE, a software as a service platform for ongoing management of chronic respiratory disease. And, on November 2, 2021, we affiliated with RespirCare by acquiring its management company PCI. Potential and completed acquisitions, strategic investments, licenses and other alliances involve numerous risks, including:

- failure to realize some or all of the anticipated benefits, financial or otherwise, of the transaction resulting from issues with acquired products or technology, introduction of competitive products or technology with attributes superior to the acquired products or technology, the failure to achieve market acceptance of the products or technology, or a delay or failure to drive sales of the acquired products or technology to anticipated levels;
- delays or other difficulty assimilating or integrating acquired or licensed technologies, products or business operations;
- failure of the target entity to satisfy post-closing obligations;
- issues maintaining uniform standards, procedures, controls and policies;

- failure of pre-acquisition due diligence such that issues that negatively affect the value or cost structure of the acquired enterprise are not uncovered;
- unanticipated costs, including the assumption of unknown or contingent liabilities and the incurrence of debt or future write-offs of significant amounts of intangible assets, goodwill, and/or long-lived assets;
- impacts related to contingent consideration payments;
- impacts as a result of purchase accounting adjustments, incorrect estimates made in the accounting for acquisitions, incurrence of non-recurring charges, or other potential financial accounting or reporting impacts;
- inaccurate assessment of additional post-acquisition or business venture investments, undisclosed contingent or other liabilities or problems, or unanticipated costs associated with the acquired entity;
- inability to successfully integrate or develop a distribution channel for acquired product lines;
- diversion of management's attention from our core business and disruption of ongoing operations;
- inability to effectively manage our expanded operations;
- disruption to our existing operations and plans;
- adverse effects on existing business relationships with suppliers and customers;
- risks associated with entering new markets or businesses in which we have limited or no experience;
- potential losses related to investments in other companies;
- loss of existing third-party license agreements or the ability to enter into new third-party license agreements for any reason, including without limitation a difference or change in one party's strategic direction;
- lack of or inadequate formal intellectual property protection mechanisms in place at an acquired business;
- infringement by acquired business or other business ventures on valid intellectual property rights of others;
- potential loss of key employees of acquired businesses; and
- increased legal and accounting compliance costs.

We do not know if we will be able to identify acquisitions or strategic relationships we deem suitable, whether we will be able to successfully complete any such transactions on favorable terms, or at all, or whether we will be able to successfully integrate any acquired business, product or technology into our business or retain any key personnel, suppliers or distributors. Our ability to successfully grow through strategic transactions depends upon our ability to identify, negotiate, complete and integrate suitable target businesses, technologies or products and, as necessary, to obtain any necessary financing. These efforts could be expensive and time-consuming and may disrupt our ongoing business and prevent management from focusing on our operations.

Additionally, we have and may seek to make additional foreign acquisitions, investments or strategic alliances which involve other unique risks, including those related to integration of operations across different cultures, languages and legal and regulatory environments, currency risks and the particular economic, political and regulatory risks associated with specific countries.

To finance any acquisitions, investments or strategic alliances, we may choose to issue shares of our common stock as consideration, which could dilute the ownership of our stockholders. Additional funds may not be available on terms that are favorable to us, or at all. If the price of our common stock is low or volatile, we may be unable to consummate any acquisitions, investments or strategic alliances using our stock as consideration.

We may be unable to manage our growth effectively, which could make it difficult to execute our business strategy.

We have been growing significantly over the past three years. Our revenue grew from $48.1 million for the year ended December 31, 2019 to $113.3 million for the year ended December 31, 2021. We intend to continue to grow our business operations and may experience periods of rapid growth and expansion. This growth could create a strain on our organizational, administrative and operational infrastructure, including our supply chain operations, quality control, technical support and customer service, sales force management and general and financial administration. We may be unable to maintain the quality, or delivery timelines, of our products or customer service or satisfy customer demand if our business grows too rapidly, including into markets or countries in which we have limited or no prior operating and commercial experience. Our

ability to manage our growth properly will require us to continue to improve our operational, financial and management controls, and our reporting systems and procedures. We may implement new systems in a number of areas affecting a broad range of business processes and functional areas. The time and resources required to implement these new systems is uncertain and failure to complete this in a timely and efficient manner could harm our business.

As our world-wide commercial operations and sales volume grow, we will need to continue to increase our workflow capacity for our supply chain, customer service, training and education personnel, invoicing, reporting and expand our internal quality assurance program, among other things. Because our products require us to devote significant resources to training our customers on the use and educating our customers on the benefits of our products, we will be required to expand these personnel as we increase our sales efforts. We may not successfully implement these increases in scale or the expansion of our personnel, which could harm our business.

Remote Physiologic Monitoring support services provided by Vapotherm Access present unique business and regulatory risks.

Health care providers pay HGE to provide RPM support services to help them remotely monitor the health and well-being of patients with certain chronic respiratory conditions. There are unique business and regulatory risks associated with these services, including, among others:

- *Patient Enrollment/Attrition:* The business viability of Vapotherm Access is dependent on working with providers and payors to identify a target patient population and engage with them on an ongoing basis. If we are unable to continue to engage these patients and give providers information regarding their patients' health and well-being, providers may be less willing to enroll their patients in Vapotherm Access support services.
- *Therapeutic Adherence*: The ability of Vapotherm Access to help providers improve the health of a target patient population is dependent on patients adhering to their prescribed therapy and submitting certain measurements and information to our RPM platform. Patients' failure to adhere to therapy could undermine the utility of these support services and negatively impact our business model.
- *Changing Coverage and Reimbursement Landscape*: Demand for Vapotherm Access services is affected by the ability of providers to receive reimbursement for these services from government and private payors. Coverage and reimbursement requirements for RPM services and devices is evolving. Changes in payor coverage and reimbursement that limit available RPM reimbursement for providers may materially impact demand for Vapotherm Access services and devices.
- *Inability to Show Savings in Value-based Arrangements:* Under some RPM support services arrangements, Vapotherm Access may receive compensation tied to improvements in the quality of patient care and the concomitant reductions in treatment cost expected to follow. If Vapotherm Access services do not assist providers in meeting certain quality or cost metrics, may not realize the potential revenue associated with meeting those metrics.
- *Compliance with Health Care Laws*: As discussed in greater detail throughout these risk factors, we conduct business in a heavily regulated and closely scrutinized industry. Comprehensive statutes and regulations govern the payments for our RPM devices and services and further regulate the manner in which we interact with payors, providers, and patients. With respect to Vapotherm Access, laws and regulations that govern providers' eligibility for reimbursement from federal healthcare programs for Vapotherm Access RPM and other services may have a significant effect on the commercial success of Vapotherm Access and may also pose a risk of liability for us if provider customers submit claims for payment to federal healthcare programs in connection with Vapotherm Access services that do not meet applicable coverage and reimbursement requirements. In addition, Vapotherm Access is subject to HIPAA by virtue of the services it provides as a business associate of health care provider customers that are HIPAA covered entities. While we make every effort to comply with all applicable laws and regulations, if we fail to do so, we could incur civil, criminal, or contractual penalties, be required to make significant changes to our operations, or experience adverse publicity. Any of these outcomes could have a material adverse effect on our business, financial condition and operating results.

Our affiliation with RespirCare, a professional entity we do not own and have no experience operating, was structured to ensure compliance with state laws prohibiting the corporate practice of medicine or fee splitting. We believe our affiliation with RespirCare was established and is being executed in compliance with law; however if our affiliation with RespirCare is found to be in violation of these or any other applicable laws our business would be adversely affected and we could be subject to penalties.

The laws of many states prohibit us from exercising control over the medical judgments or decisions of physicians and from engaging in certain financial arrangements with physicians on account of state corporate practice of medicine or fee-splitting laws. These laws generally prohibit the practice of medicine by, or sharing of professional fees with, lay persons or entities and are intended to prevent unlicensed persons or entities from interfering with or inappropriately influencing a physician's professional judgment. These laws and their interpretations vary from state to state and are enforced by state courts and regulatory authorities, each with broad discretion, and are subject to change and to evolving interpretations by courts, state boards of medicine and state attorneys general. Penalties for violations of the corporate practice of medicine vary by state and may result in physicians being subject to disciplinary action, as well as to forfeiture of revenues from payors for services rendered. For lay entities, violations may also bring both civil and, in more extreme cases, criminal liability for engaging in medical practice without a license.

Through subsidiaries we entered into various agreements with RespirCare, an Oklahoma professional limited liability company, which in turn enters into contracts with providers to render professional medical services. Our agreements with RespirCare include a management services agreement between our subsidiary, Vapotherm Access Management Services LLC ("Manager"), and RespirCare, pursuant to which Manager provides day-to-day non-clinical management and administrative services to RespirCare, which reserves exclusive control and responsibility for all aspects of the practice of medicine and the delivery of medical services, including telehealth services, to patients. Although we seek to substantially comply with applicable state prohibitions on the corporate practice of medicine and fee splitting, changes in, or subsequent interpretations of, the corporate practice of medicine laws could circumscribe our business operations, and state officials who administer these laws or other third parties may successfully challenge our existing organization and contractual arrangements. If such a claim were successful, we could be subject to civil and criminal penalties and could be required to restructure or terminate the applicable contractual arrangements. State corporate practice of medicine doctrines also often impose penalties on physicians themselves for aiding the corporate practice of medicine, which could discourage physicians from participating in our network of providers.

We do not own RespirCare, which is a 100% physician owned independent entity. RespirCare is owned by a prominent Tulsa, Oklahoma pulmonologist. While we expect this relationship to continue, we cannot guarantee that it will. A material change in our relationship with RespirCare or its owner, whether resulting from a dispute or a change in government regulation, could impair our ability to execute our strategy and could have a material adverse effect on our business, financial condition and results of operations. In addition, our subsidiaries' contractual arrangements with RespirCare, which we have entered into in order to comply with state corporate practice of medicine doctrines, could subject us to additional scrutiny by federal and state regulatory bodies regarding federal and state fraud and abuse laws. Any scrutiny, investigation, or litigation with regard to our arrangement with RespirCare could have a material adverse effect on our business, financial condition and results of operations and, potentially, subject us to penalties.

We have no experience affiliating with or managing a medical practice and its network of providers. There is a risk this lack of experience will make it difficult to execute on our strategy of becoming a patient management company specializing in complex lung disease or cause our strategy to fail with respect to our relationship with RespirCare and, potentially, other providers. We have encountered and will continue to encounter significant risks and uncertainties frequently experienced by growing companies in rapidly changing industries, such as determining appropriate investments for our limited resources, competition from other healthcare provider networks, acquiring and retaining patients, and attracting, integrating, and retaining skilled network providers. If our assumptions regarding these and other similar risks and uncertainties, which we use to plan our business, are incorrect or change as we gain more experience operating this component of our business or due to changes in our industry, or if we do not address these challenges successfully, our operating and financial results could differ materially from our expectations and our business could suffer.

In connection with our strategy of becoming the preeminent complex lung disease patient management company, we expect to enter into value-based managed care arrangements with other participants and payors in the continuum of care for complex lung disease patients. If our value-based care arrangements violate the law, our business could be adversely affected and we could be subject to penalties; further, there is no guarantee such value-based arrangements will be established or that, if established, they will be successful or profitable.

On November 20, 2020, the Centers for Medicare & Medicaid Services and the U.S. Department of Health and Human Services' Office of the Inspector General issued two final rules implementing changes to the Physician Self-Referral Law, or Stark Law, and the Anti-Kickback Statute ("AKS"), which largely became effective on January 19, 2021. Among other rule changes, the final rules provided new exceptions and safe harbors to the Stark Law and the AKS, respectively, for certain value-based arrangements, designed to encourage healthcare innovation and protect arrangements that further care coordination and increased efficiencies to improve outcomes and the quality of care for patients.

On November 2, 2021, the Company formed Vapotherm Access Care Management Network LLC, a subsidiary of HGE, in order to establish a value-based enterprise ("VBE") that will enter into various value-based arrangements with participants of the VBE related to the coordination and management of care for patients with respiratory disease, including through the provision of Vapotherm Access services to such patients. The VBE's current participants are RespirCare and Vapotherm Access, and we expect that in the future other healthcare organizations, providers, and third party payors will become VBE participants. We have structured and will structure the VBE's value-based arrangements to comply with many of the criteria for safe harbor protection under the AKS; however, these value-based arrangements may be found to not satisfy all elements of applicable safe harbors. If one or more of the VBE's value-based arrangements with healthcare organizations and healthcare providers were found to be in violation of the AKS, the Stark Law or other similar laws, we could be required to restructure or terminate such arrangements. We could also be required to repay to Medicare, Medicaid or other federal healthcare program amounts pursuant to any prohibited referrals, and we could be subject to criminal and monetary penalties and exclusion from federal and state healthcare programs. Imposition of any of these penalties could have a material adverse impact on our business, financial condition and results of operations.

In line with the value-based exceptions and safe harbors under the Stark Law and AKS, there is a broader trend in the healthcare industry to transition from volume to value-based reimbursement models, which can include risk-sharing, bundled payment and other innovative approaches. While these models provide us with opportunities to provide new or additional services and to participate in incentive-based payment arrangements through the VBE and its value-based arrangements with healthcare organizations and healthcare providers, there can be no assurance that such new models and approaches will be created or be profitable to us. Further, new models and approaches may require investment by us to develop technology or expertise to offer necessary and appropriate solutions or support to RespirCare, HGE and other VBE participants, and we do not fully know the amount and timing for return of such investment at this time. New and existing laws, regulations or guidance on value-based arrangements could have a material adverse effect on our operations and could subject us to the risk of restructuring or terminating our arrangements with RespirCare, HGE and other VBE participants, as well as the risk of regulatory enforcement, penalties and sanctions, if state or federal enforcement agencies disagree with our interpretation of these laws.

The success of the VBE depends upon our continued ability to collaborate with and expand a network of high-caliber healthcare organizations and healthcare providers as VBE participants who can provide high quality of care, improve clinical outcomes and effectively manage healthcare costs, which are key drivers of our profitability. Our VBE participants could demand an increased payment arrangement or take other actions, or fail to take actions, that could result in higher medical costs, lower quality of care for our members, harm to our reputation or create difficulty meeting regulatory or other requirements. Likewise, our VBE participants could take actions contrary to our instructions, requests, policies or objectives or applicable law, or could have economic or business interests or goals that are or become inconsistent with our own. Further, our VBE participants may not engage with our platform to assist in improving overall quality of care and management of healthcare costs, which could produce results that are inconsistent with our estimates and financial models and negatively impact our growth.

Members will receive care from our affiliated professional entity, RespirCare, Vapotherm Access, and other VBE participants. We cannot guarantee the quality and efficiency of services from such VBE participants. Members who receive sub-optimal healthcare from such participating providers may be dissatisfied with our VBE participant healthcare organizations and healthcare providers, which would have a negative impact on member satisfaction and retention. Any of these consequences could adversely impact our business, financial condition and results of operations. We could also experience significant losses if the expenses incurred to deliver healthcare services to our attributed members exceed revenues we receive from payors in respect of our attributed members. To manage total medical services expense, we rely on RespirCare's and other VBE participants' ability to improve clinical outcomes, implement clinical initiatives to provide a better healthcare experience for our members and accurately and sufficiently document the risk profile of our members. If the cost of medical care provided exceeds the corresponding revenue we receive, we may realize operating deficits, which could lead to substantial losses.

Risks Related to Our Dependence on Others

Except for in the United Kingdom and Germany, we rely on a network of third-party distributors to market and distribute our products internationally, and if we are unable to maintain and expand this network, we may be unable to generate anticipated sales.

Except for in the United Kingdom and Germany where we now have direct sales organizations, we rely on our network of third-party distributors to market and distribute our products internationally. Internationally, we sell our products through a network of 50 independent distributors. Through these distributors, we sell our products in 54 countries outside of the United States, and we expect a significant amount of our revenue to come from international sales for the foreseeable future. In the past, we have experienced issues collecting payments from certain of our independent distributors and we may again experience such issues in the future.

We face significant challenges and risks in managing our geographically dispersed distribution network and retaining the companies who make up that network. Broadly, if we fail to comply with export control laws or successfully develop our relationships with international distributors, our sales could fail to grow or could decline, and our ability to grow our business could be adversely affected. We also cannot control the efforts and resources our third-party distributors will devote to marketing our products. Our distributors may be unable or unwilling to successfully market and sell our products and may not devote sufficient time and resources to support the marketing and selling efforts that enable the products to develop, achieve or sustain market acceptance in their respective jurisdictions. Additionally, in some international jurisdictions, we rely on our distributors to manage the regulatory process, while complying with all applicable rules and regulations, and we are dependent on their ability to do so effectively. If we are unable to attract or retain additional international distributors, our international revenue may not grow.

If any of our international distributors were to cease to do business with us, our sales could be adversely affected. Some of our distributors have historically accounted for a material portion of our sales volume. If any such agency or distributor were to have its business operations impacted as a result of a third-party acquisition or cease to sell and market our products altogether, our sales could be adversely affected. In addition, if a dispute arises with a distributor or a distributor is terminated by us or goes out of business, it may take time to locate an alternative distributor or to begin selling directly into that market, to seek appropriate regulatory approvals or to train new personnel to market our products, and our ability to sell those systems in the region formerly serviced by such terminated distributor could be harmed. Any of our distributors could become insolvent or otherwise become unable to pay amounts owed to us when due. Any of these factors could reduce our revenue from affected markets, increase our costs in those markets or damage our reputation. If a distributor were to depart or be retained by one of our competitors and begin selling a competitive product, we may be unable to prevent them from helping competitors or themselves solicit business from our existing customers, which could further adversely affect our sales.

In any situation in which we lose the services of a distributor, we may need to seek alternative sales agencies or distributors, or to begin selling directly ourselves, and our sales may be adversely affected. Because of the intense competition for their services, we may be unable to recruit or retain additional qualified distributors to work with us. We may be unable to enter into agreements with them on a timely basis or on favorable or commercially reasonable terms, if at all. Failure to hire or retain qualified distributors would prevent us from expanding our business and generating sales.

As a result of our reliance on third-party sales distributors, we may be subject to disruptions and increased costs due to factors beyond our control, including labor strikes, third-party error and other issues. If the services of any of these third-party distributors become unsatisfactory, we may experience delays in meeting our customers' product demands and we may be unable to find a suitable replacement on a timely basis or on commercially reasonable terms. Any failure to deliver products in a timely manner may damage our reputation and could cause us to lose current or potential customers.

We obtain some of the components and subassemblies included in our High Velocity Therapy Precision Flow systems from single source suppliers and the partial or complete loss of one or more of these suppliers could cause significant production delays, an inability to meet customer demand and a substantial loss in revenue.

We utilize single source suppliers for some of the critical components and subassemblies we use in our Precision Flow systems. Disputes (including litigation) could arise with suppliers over a wide range of business and legal issues in our supply agreements, and there may be delays in switching to alternative suppliers if the current supply source expires or terminates. Our dependence on single source suppliers of components may expose us to several risks, including, among other things:

- our suppliers may encounter financial hardships as a result of unfavorable economic and market conditions unrelated to our demand for components, which could inhibit their ability to fulfill our orders and meet our requirements;
- our suppliers may fail to comply with regulatory requirements, be subject to lengthy compliance, validation or qualification periods or make errors in manufacturing components that could negatively affect the efficacy or safety of our products or cause delays in supplying of our products to our customers;
- newly identified suppliers may not qualify under the stringent regulatory standards to which our business is subject;
- heightened risk of commercial disputes (including litigation) if we or our suppliers seek to negotiate changes to the terms of our supply agreements;
- we or our suppliers may not be able to respond to unanticipated changes in customer orders, and if orders do not match forecasts, we or our suppliers may have excess or inadequate inventory of materials and components;
- we may experience delays in delivery by our suppliers due to changes in demand from us or their other customers;
- we or our suppliers may lose access to critical manufacturing equipment, services, and components, resulting in an interruption in the manufacture, assembly and shipment of our systems and in higher cost to us;
- our suppliers may be subject to allegations by other parties of misappropriation of proprietary information in connection with their supply of products to us, which could inhibit their ability to fulfill our orders and meet our requirements;
- fluctuations in demand for products that our suppliers manufacture for others may affect their ability or willingness to deliver components to us in a timely manner;
- we may fail to effectively manage our relationships with our suppliers;
- our suppliers may increase the price of the components we purchase above the then-current market prices;
- our suppliers may wish to discontinue supplying components or services to us; and
- we may not be able to find new or alternative components or reconfigure our system and manufacturing processes in a timely manner if the necessary components become unavailable for any reason, including manufacturing equipment failure.

In addition, we may be deemed to manufacture or contract to manufacture products that contain certain minerals that have been designated as “conflict minerals” under the Dodd-Frank Wall Street Reform and Consumer Protection Act. As a result, we are required to diligence the origin of such minerals and disclose and report whether or not such minerals originated in the Democratic Republic of the Congo or adjoining countries. The implementation of these new requirements could adversely affect the sourcing, availability, and pricing of minerals used in the manufacture of our products. In addition, we may incur additional costs to comply with the disclosure requirements, including costs related to determining the source of any of the relevant minerals and metals used in our products.

If any of these risks materialize, costs could significantly increase and our ability to meet demand for our products could be impacted.

If we are unable to satisfy commercial demand for our products in a timely manner, our ability to generate revenue would be impaired, market acceptance of our products could be adversely affected and customers may instead purchase or use alternative products. In addition, we could be forced to secure new or alternative components and subassemblies through a

replacement supplier. Finding alternative sources for these components and subassemblies could be difficult in certain cases and may entail a significant amount of time, disruption and increased cost. In some cases, we would need to change the components or subassemblies if we sourced them from an alternative supplier. This, in turn, could require product redesigns which could potentially require additional FDA or international clearance or approval before we could use any redesigned product with new components or subassemblies, thereby causing further costs and delays that could adversely affect our business, financial condition and operating results.

We do not have long-term supply contracts with all our third-party suppliers.

We purchase components and subassemblies from third-party suppliers, including some of our single source suppliers, through purchase orders and do not have long-term supply contracts with some of these third-party suppliers. These third-party suppliers, therefore, are not obligated to perform services or supply products to us for any specific period, in any specific quantity or at any specific price, except as may be provided in a particular purchase order. For certain of these suppliers, we do not maintain large volumes of inventory. If we inaccurately forecast demand for components or subassemblies, our ability to manufacture and commercialize our High Velocity Therapy systems could be delayed and our competitive position and reputation could be harmed.

We often maintain high levels of inventory from our single source suppliers, which could consume a significant amount of our resources, reduce our cash flows and lead to inventory impairment charges.

Our High Velocity Therapy systems consist of a substantial number of components. In order to market or sell them effectively, we often must maintain high levels of inventory of the product and its components from our single source suppliers. The manufacturing process requires lengthy lead time during which components may become obsolete, and we may over- or under-estimate the amount needed of a given component, in which case we may expend extra resources or be constrained in the amount of end product that we produce.

Similarly, in order to market or sell our Oxygen Assist Module effectively, we often must maintain high levels of finished goods inventory from a single source supplier. The manufacturing process requires lengthy lead times during which components of our Oxygen Assist module may become obsolete, and we may over- or under-estimate the number of finished goods required, in which case we may expend extra resources or be constrained in the amount of Oxygen Assist Modules that we procure.

Performance issues, service interruptions or price increases by our shipping carriers could adversely affect our business and harm our reputation and ability to provide our products on a timely basis.

Expedited, reliable shipping is essential to our operations. We rely heavily on providers of transport services for reliable and secure point-to-point transport of our products to our customers and for tracking of these shipments. Should a carrier encounter delivery performance issues such as loss, damage or destruction of Precision Flow systems, or Oxygen Assist Modules, it would be costly to replace such systems in a timely manner and such occurrences may damage our reputation and lead to decreased demand for our products and increased cost and expense to our business. In addition, any significant increase in shipping rates could adversely affect our operating margins and results of operations. Similarly, strikes, severe weather, natural disasters or other service interruptions affecting delivery services we use would adversely affect our ability to process orders for our products on a timely basis.

The loss of our senior management or our inability to attract and retain highly skilled employees could negatively impact our business.

Our success depends on the skills, experience and performance of the members of our executive management team, particularly Joseph Army, our Chief Executive Officer. The loss of the services of any of these persons for any reason whatsoever, could impede the achievement of our research, development and commercialization objectives. Also, each of these persons may terminate their employment with us at any time. We do not maintain “key person” insurance for any of our executives or other employees.

Additionally, our business and operations depend on our ability to attract and retain highly skilled employees. We may be unable to attract or retain qualified employees in the future for many reasons, including low regional, domestic, and international unemployment rates, the competition for qualified personnel among medical device businesses, or the cost of hiring qualified employees may exceed industry standards. Recruiting and retention difficulties could limit our ability to support our commercial, supply chain and research and development programs. Any of our employees may terminate his or her employment at any time and for any reason. The loss of key employees, the failure of any key employee to perform, our inability to attract and retain skilled employees, as needed, or an inability to effectively plan for and implement a succession plan for key employees could harm our business.

Risks Related to Government Regulation

Our products and operations are subject to extensive government regulation and oversight both in the United States and abroad, and our failure to comply with applicable requirements could harm our business.

We and our products are subject to extensive regulation in the United States and elsewhere, including by the Food and Drug Administration, or the FDA, and its foreign counterparts. The FDA regulates the design, development, manufacturing, labeling, storage, non-clinical and clinical research, safety, efficacy, packaging, installation, servicing, marketing and distribution, premarket clearance or approval, recordkeeping, advertising, promotion, recalls and field safety corrective actions, adverse event reporting, post-market approval studies, and product import and export to ensure that medical devices distributed domestically are safe and effective for their intended uses and meet other applicable requirements of the Federal Food, Drug, and Cosmetic Act, or the FDCA.

The regulations to which we are subject are complex. Additional regulatory changes could result in restrictions on our ability to carry on or expand our operations, higher than anticipated costs or lower than anticipated sales. The FDA enforces these regulatory requirements through, among other methods of oversight, periodic unannounced inspections. We do not know whether we will pass any future FDA inspections. Failure to comply with applicable regulations could jeopardize our ability to sell our products and result in enforcement actions such as: warning letters; fines; injunctions; civil penalties; termination of distribution; recalls or seizures of products; delays in the introduction of products into the market; total or partial suspension of production; refusal to grant future clearances or approvals; withdrawals or suspensions of current clearances or approvals, resulting in prohibitions on sales of our products; and in the most serious cases, criminal penalties.

Additionally and as noted above, our strategy to become a complex lung disease patient care company will subject us to a variety of additional state and federal laws and regulations.

We may not receive the necessary authorizations to market our future products, and failure to timely obtain such authorizations for our future products would adversely affect our ability to grow our business.

An element of our business strategy is to continue to develop new products and add new features and expand clearance or approval of our current products to new indications. In the United States, in general, before we can market a new medical device, or a new use of, new claim for or significant modification to a legally marketed device, we must first receive either clearance under Section 510(k) of the FDCA or the grant of a *de novo* request under section 513(f)(2) of the FDCA or a premarket approval application, or PMA, from the FDA, unless an exemption applies. In the 510(k) clearance process, before a device may be marketed, the FDA must determine that a proposed device is "substantially equivalent" to a legally-marketed "predicate" device. To be "substantially equivalent," the proposed device must have the same intended use as the predicate device, and either have the same technological characteristics as the predicate device or have different technological characteristics, not raise different questions of safety or effectiveness than the predicate device and be as safe and as effective as the predicate device. Clinical data are sometimes required to support a substantial equivalence determination. In the *de novo* process, a manufacturer whose novel device under the FDCA would otherwise be automatically classified as Class III and require the submission and approval of a PMA prior to marketing is able to request down-classification of the device to Class I or Class II on the basis that the device presents a low or moderate risk. If the FDA grants the *de novo* petition, the applicant will receive authorization to market the device. This device type may be used subsequently as a predicate device for 510(k) submissions. In the PMA process, the FDA must determine that a proposed device is safe and effective for its intended use based, in part, on extensive data, including, but not limited to, technical, pre-clinical, clinical trial, manufacturing and labeling data. The PMA process is typically required for devices that are deemed to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices.

The PMA approval, the 510(k) clearance and the *de novo* processes can be expensive, lengthy and uncertain. The FDA's 510(k) clearance and *de novo* processes can take from three to 12 months but may last significantly longer. The process of obtaining a PMA is much more costly and uncertain than the 510(k) clearance process and generally takes from one to three years, or even longer, from the time the application is filed with the FDA. In addition, a PMA generally requires the performance of one or more clinical trials. Clinical data may also be required in connection with an application for 510(k) clearance or a *de novo* request. Despite the time, effort and cost, a device may not be approved, reclassified or cleared by the FDA. Any delay or failure to obtain necessary regulatory clearances or approvals could harm our business. Furthermore, even if we are granted regulatory clearances or approvals, they may include significant limitations on the indications for use or intended uses of the device, which may limit the market for the device.

In the United States, we obtained 510(k) premarket clearances from the FDA to market each of our products requiring such clearance. We also obtained a *de novo* grant for an expanded indication for our Precision Flow Hi-VNI system. Any modifications to these existing products may require new 510(k) clearance; however, future modifications may be subject to the substantially more costly, time-consuming and uncertain *de novo* process or PMA process. If the FDA requires us to go

through a lengthier, more rigorous premarket review process for future products or modifications to existing products than we had expected, such as with our Oxygen Assist Module, product introductions or modifications could be delayed or canceled, which could cause our sales to decline.

The FDA can delay, limit or deny 510(k) clearance, request for *de novo* classification, or pre-market approval of a device for many reasons, including:

- we may be unable to demonstrate to the FDA's satisfaction that the products or modifications are substantially equivalent to a proposed predicate device or safe and effective for their intended uses;
- FDA or the applicable foreign regulatory body may disagree with the design, conduct or implementation of our clinical trials or the analyses or interpretation of data from pre-clinical studies or clinical trials;
- participants in our clinical trials may experience serious adverse effects;
- the data from our pre-clinical studies and clinical trials may be insufficient to support clearance, *de novo* classification, or approval, where required;
- we may be unable to demonstrate that the clinical and other benefits of the device outweigh the risks;
- an advisory committee, if convened by the applicable regulatory authority, may recommend against authorization for marketing or may recommend that the applicable regulatory authority require, as a condition of marketing authorization, additional preclinical studies or clinical trials, limitations on labeling or distribution and use restrictions, or even if an advisory committee, if convened, makes a favorable recommendation, the respective regulatory authority may still not authorize the product for marketing;
- the applicable regulatory authority may identify deficiencies in our submissions or in the facilities or processes of our third-party contract manufacturers;
- the policies or regulations of the FDA or applicable foreign regulatory bodies may change significantly in a manner rendering our clinical data or regulatory filings insufficient for clearance, *de novo* classification, or approval; and
- the FDA or foreign regulatory authorities may audit our clinical trial data and conclude that the data is not sufficiently reliable to support a submission for marketing authorization.

In addition, the FDA may change its policies, adopt additional regulations or revise existing regulations, or take other actions, or Congress may enact different or additional statutory requirements, which may prevent or delay approval, *de novo* classification, or clearance of our future products under development or impact our ability to modify our currently marketed products on a timely basis. Such policy, statutory or regulatory changes could impose additional requirements upon us that could delay our ability to obtain new 510(k) clearances, *de novo* classifications, or PMA approvals, increase the costs of compliance or restrict our ability to maintain our current marketing authorizations.

In order to sell our products in member countries of the European Economic Area (the 27 member states of the European Union plus Iceland, Liechtenstein and Norway), or the EEA, our products must comply with the essential requirements of the EU Medical Devices Directive (Council Directive 93/42/EEC), or the MDD. Compliance with these requirements is a prerequisite to be able to affix the CE Mark to our products, without which they cannot be sold or marketed in the EEA. To demonstrate compliance with the essential requirements we must undergo a conformity assessment procedure, which varies according to the type of medical device and its classification. Except for low-risk medical devices (Class I non-sterile, non-measuring devices), where the manufacturer can issue an EC Declaration of Conformity based on a self-assessment of the conformity of its products with the essential requirements of the MDD, a conformity assessment procedure requires the intervention of an organization accredited by a Member State of the EEA to conduct conformity assessments, or a Notified Body. Depending on the relevant conformity assessment procedure, the Notified Body would typically audit and examine the technical file and the quality system for the manufacture, design and final inspection of our devices. The Notified Body issues a certificate of conformity following successful completion of a conformity assessment procedure conducted in relation to the medical device and its manufacturer and their conformity with the essential requirements. This certificate entitles the manufacturer to affix the CE Mark to its medical devices after having prepared and signed a related EC Declaration of Conformity.

As a general rule, demonstration of conformity of medical devices and their manufacturers with the essential requirements must be based, among other things, on the evaluation of clinical data supporting the safety and performance of the products during normal conditions of use. Specifically, a manufacturer must demonstrate that the device achieves its intended performance during normal conditions of use, that the known and foreseeable risks, and any adverse events, are minimized and acceptable when weighed against the benefits of its intended performance, and that any claims made about the performance and safety of the device are supported by suitable evidence. If we fail to remain in compliance with applicable European laws and directives, we would be unable to continue to affix the CE Mark to our devices, which would prevent us from selling them within the EEA.

On May 26, 2021, the new EU Medical Devices Regulation (Regulation (EU) 2017/745 of the European Parliament and of the Council), or the MDR, replaced the EU MDD in the European Economic Area. In regard to the UK, because the MDR was codified into UK law at the time of Brexit, the same MDR requirements will apply to our commercial activity in the UK, at least during the post-Brexit transition period.

The new MDR imposes more strict requirements on medical device manufacturers and the Notified Bodies whom they must involve in the conformity assessment procedure (other than self-declaration Class I non-sterile, non-measuring devices and (new) non-reusable surgical instruments). The MDR adds new requirements, such as a reclassification of certain devices, a Unique Device Identification (UDI) system, a wider scope of the Quality Management System including clinical evaluation and post-marketing clinical follow-up, a clinical evaluation procedure for some Class IIb and Class III devices by an independent expert panel, among others. New medical devices introduced after May 26, 2021 must comply with the MDR rules. That means we now need to undergo the applicable conformity assessment procedure according to MDR, through representation by a Notified Body, for all new devices we introduce. The new devices have to be CE marked pursuant to MDR.

The sale and marketing of imported medical device products in China are subject to notifications (for Class I devices) or registrations (for Class II and III devices) with the NMPA. The CMDE of the NMPA will need to conduct technical review of product safety and effectiveness with respect to imported Class 2 and Class 3 devices. The statutory time limit for such technical review is 60 working days for Class 2 devices and 90 working days for Class 3 devices. Additional time can be required for the response to the CMDE's deficiency notices and the GMP compliance inspections conducted by the Center for Food and Drug Institute ("CFDI") of the NMPA. Furthermore, manufacturers are likely to be required to conduct local clinical trials in China if their devices are not on the NMPA Clinical Trial Exemption List, are not substantially equivalent to a predicate device on the market, or do not have any overseas clinical study data or real world evidence to prove safety and effectiveness in Chinese patient population. Additionally, pre-submission in-country type testing by the NMPA-designated testing centers can further prolong the approval process, especially when applicable Chinese device standards are not harmonized with corresponding international standards. The whole process for obtaining regulatory clearances or approvals in China can be lengthy and expensive, and the results are unpredictable. In addition, uncertain regulatory or political environment changes and healthcare system reforms in China may result in the delay of certain regulatory clearance or approval for some of our products.

We or our distributors will also need to obtain regulatory approval in other foreign jurisdictions in which we plan to market and sell our products. The time required to obtain registrations or approvals, if required by other countries, may be longer than that required for FDA clearance, and requirements for such registrations, clearances or approvals may significantly differ from FDA requirements. If we modify our products, we or our distributors may need to apply for additional regulatory approvals before we are permitted to sell the modified product. In addition, we may not continue to meet the quality and safety standards required to maintain the authorizations that we or our distributors have received. If we or our distributors are unable to maintain our authorizations in a particular country, we will no longer be able to sell the applicable product in that country.

Marketing authorization by the FDA does not ensure clearance or approval by regulatory authorities in other countries, and clearance or approval by one or more foreign regulatory authorities does not ensure marketing authorization by regulatory authorities in other foreign countries or by the FDA. However, a failure or delay in obtaining regulatory clearance or approval or other marketing authorization in one country may have a negative effect on the regulatory process in others.

Certain modifications to our products may require new 510(k) clearance or other marketing authorizations and may require us to recall or cease marketing our products.

Once a medical device is permitted to be legally marketed in the United States pursuant to a 510(k) clearance, *de novo* classification, or a PMA, a manufacturer may be required to notify the FDA of certain modifications to the device. Manufacturers determine in the first instance whether a change to a product requires a new premarket submission, but the FDA may review any manufacturer's decision. The FDA may not agree with our decisions regarding whether new clearances or approvals are necessary. We have made modifications to our products in the past and have determined based on our review of

the applicable FDA regulations and guidance that in certain instances new 510(k) clearances or other premarket submissions were not required. We may make similar modifications or add additional features in the future that we believe do not require a new 510(k) clearance, *de novo* classification, or approval of a PMA or PMA amendments or supplements. If the FDA disagrees with our determinations and requires us to submit new 510(k) notifications, requests for *de novo* classification, or PMAs (or PMA supplements or amendments) for modifications to our previously cleared or reclassified products for which we have concluded that new clearances or approvals are unnecessary, we may be required to cease marketing or to recall the modified product until we obtain clearance or approval, and we may be subject to significant regulatory fines or penalties.

The misuse or off-label use of our products may harm our reputation in the marketplace, result in injuries that lead to product liability suits or result in costly investigations, fines or sanctions by regulatory bodies if we are deemed to have engaged in the promotion of these uses, any of which could be costly to our business.

Our products have been cleared by the FDA for specific indications. The FDA and European regulatory authorities strictly regulate the indications for use and associated promotional safety and effectiveness claims, including comparative and superiority claims vis a vis competitors' products, that may be made about legally marketed products. In particular, a medical device may not be promoted in a way that constitutes adulteration or misbranding under the FDCA. We train our marketing personnel and sales representatives and distributors to promote our products consistent with applicable laws and published clinical data. However, a physician, in his or her medical judgment, can prescribe a course of treatment that is outside the product's labeling. There may be increased risk of injury to patients if physicians attempt to use our products in this manner. Furthermore, the use of our products for indications other than those authorized by the FDA or approved by any foreign regulatory body may not effectively treat such conditions, which could harm our reputation in the marketplace among physicians and patients.

If the FDA or any foreign regulatory body determines that our promotional materials, sales practices or training constitute improper promotion of an off-label use, including as a result of their disagreement with our interpretation of published clinical data or the FDA's recent grant of our *de novo* request and corresponding expanded indications for use, they could request that we modify our training, sales practices or promotional materials or subject us to regulatory or enforcement actions, including the issuance or imposition of an untitled letter, warning letter, injunction, seizure, civil fine or criminal penalties. It is also possible that other federal, state or foreign enforcement authorities might take action under other regulatory authority, such as false claims laws, if they consider our business activities to constitute promotion of an off-label use, which could result in significant penalties, including, but not limited to, criminal, civil and administrative penalties, damages, fines, disgorgement, exclusion from participation in government healthcare programs and the curtailment of our operations. Additionally, the FDA might fail to take action against competitors whose promotional materials, sales practices or training mirror our own but who have not yet achieved the expanded indications for use we received in connection with the FDA's recent grant of our *de novo* request. These types of enforcement actions, or enforcement omissions, could have a material adverse impact on our business, product sales and financial results.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, expeditiously and effectively evaluate product complaints and promotional matters, or otherwise prevent new or modified products and indications from being developed, cleared or approved, or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to hire, retain, or deploy key leadership and other personnel, expeditiously and effectively evaluate product complaints and promotional matters, or otherwise review and clear or approve new or modified products and indications can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, a dramatic increase in Emergency Use Authorizations or other regulatory submissions, a dramatic increase in the issuance of guidance documents, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may impede the FDA's ability to expeditiously evaluate product complaints and promotional matters, and may also slow the time necessary for new medical devices or modifications to cleared or approved medical devices or indications to be reviewed and/or approved by necessary government agencies, which would adversely affect our business.

For example, over the last several years, including for 35 days beginning on December 22, 2018, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical employees and stop critical activities. As another example, following the FDA's issuance of certain Emergency Use Authorization communications in March 2020 that identified the product code that includes our Precision Flow Hi-VNI system, QAV, on a list of ventilators and/or ventilatory support devices, we prepared a letter-to-file to modify the indications for use of the Precision Flow Hi-VNI system. We believe these modifications are consistent with the FDA's recent

communication and our clinical data. However, to the extent we market the Precision Flow Hi-VNI system using the modified labeling, the possibility exists that the FDA may not agree with the decision that a new clearance or approval was unnecessary for this label revision for any number of reasons, including, without limitation, that we used an inappropriate intended use statement, and as a result may require us to submit a new 510(k) notification, request for *de novo* classification, premarket approval ("PMA") (or PMA supplements or amendments) or subject us to other consequences. In addition, on April 29, 2020 the FDA reached out with an informal inquiry regarding our marketing of the Precision Flow Hi-VNI system. We responded to that inquiry in a timely manner, but the FDA may ultimately determine that our website or other promotional materials, sales practices, or training constitute the improper promotion of a medical device.

Additionally, in response to the global pandemic of COVID-19, on March 10, 2020, the FDA announced its intention to postpone most foreign inspections of manufacturing facilities and products through April 2020, and subsequently, on March 18, 2020, the FDA announced its intention to temporarily postpone routine surveillance inspections of domestic manufacturing facilities. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our marketing applications, clinical trial authorizations, emergency use applications, or other regulatory submissions, which could have a material adverse effect on our business.

Our products must be manufactured in accordance with federal, state and international regulations, and we could be forced to recall our installed devices or terminate production if we fail to comply with these regulations.

The methods used in, and the facilities used for, the manufacture of our products must comply with the FDA's Quality System Regulation, or QSR, which is a complex regulatory scheme that covers the procedure and documentation of, among other requirements, the design, testing, validation, verification, complaint handling, production, process controls, quality assurance, labeling, supplier evaluation, packaging, handling, storage, distribution, installation, servicing and shipping of medical devices. Furthermore, we are required to verify that our suppliers maintain facilities, procedures and operations that comply with our quality standards and applicable regulatory requirements. The FDA enforces the QSR through, among other oversight methods, periodic announced or unannounced inspections of medical device manufacturing facilities, which may include the facilities of subcontractors, suppliers, or contract manufacturing organizations. Our products are also subject to similar state regulations and various laws and regulations of foreign countries governing manufacturing. For example, certain of our electrical components in our products are audited pursuant to International Electrotechnical Transmission standard 60601, a widely accepted benchmark for medical electrical equipment compliance that has become a requirement for the commercialization of electrical medical equipment in many countries. We are routinely audited under this standard and negative findings from an audit could prevent us from marketing our products in certain countries.

Our third-party manufacturers may not take the necessary steps to comply with applicable regulations or our specifications, which could cause delays in the delivery of our products. In addition, failure to comply with applicable FDA requirements or later discovery of previously unknown problems with our products or manufacturing processes could result in, among other things: warning letters or untitled letters; customer notifications or repair, replacement, refunds, recall, detention or seizure of our products; fines, injunctions or civil penalties; suspension or withdrawal of approvals or clearances; seizures or recalls of our products; total or partial suspension of production or distribution; administrative or judicially imposed sanctions; the FDA's refusal to grant pending or future clearances or approvals for our products; clinical holds; refusal to permit the import or export of our products; and criminal prosecution of us or our employees.

Any of these actions could significantly and negatively impact supply of our products. If any of these events occurs, our reputation could be harmed, we could be exposed to product liability claims and we could lose customers and suffer reduced revenue and increased costs.

Our products may cause or contribute to adverse medical events that we are required to report to the FDA and other governmental authorities, and if we fail to do so, we would be subject to sanctions that could harm our reputation, business, financial condition and results of operations. The discovery of serious safety issues with our products, or a recall of our products either voluntarily or at the direction of the FDA or another governmental authority, could have a negative impact on us.

Our products are subject to extensive regulation by the FDA in the United States and by regulatory agencies in other countries where we do business. We will be required to timely file various reports with the FDA, including reports required by the medical device reporting regulations, or MDRs, which require us to report to the FDA when we receive or become aware of information that reasonably suggests that one or more of our products may have caused or contributed to a

death or serious injury or malfunctioned in a way that, if the malfunction were to recur to the device or a similar device that we market, could cause or contribute to a death or serious injury. The timing of our obligation to report is triggered by the date we become aware of the adverse event as well as the nature of the event. We may fail to report adverse events of which we become aware within the prescribed timeframe. We may also fail to recognize that we have become aware of a reportable adverse event, especially if it is not reported to us as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of the product. If we fail to comply with our reporting obligations, the FDA or other governmental authorities could take action, including warning letters, untitled letters, administrative actions, criminal prosecution, imposition of civil monetary penalties, revocation of our device clearance, seizure of our products or delay in clearance of future products.

The FDA and certain foreign regulatory bodies have the authority to require the recall of commercialized products under certain circumstances. The FDA's authority to require a recall must be based on a finding that there is reasonable probability that the device could cause serious injury or death.

A government-mandated or voluntary recall by us could occur as a result of an unacceptable risk to health, component failures, malfunctions, manufacturing defects, labeling or design deficiencies, packaging defects or other deficiencies or failures to comply with applicable regulations. We have in the past conducted voluntary recalls of devices with lot-specific quality issues. For example, in September 2014, we initiated a voluntary recall of various lots of the disposable patient circuit due to the device allowing water to leak into the center gas lumen. This recall was terminated in October 2015. Additionally, we received a small number of complaints involving a defect in the disposable patient circuit that allowed water to leak where the delivery tube is connected to the disposable water path. In response, we initiated a voluntary recall of the four affected lots that began on May 4, 2016 and terminated on August 17, 2016. Product defects or other errors resulting in recalls may occur in the future.

Depending on the corrective action we take to redress a product's deficiencies or defects, the FDA or other governmental bodies may require, or we may decide, that we will need to obtain new marketing authorizations for the device before we may market or distribute the corrected device. Seeking such marketing authorizations may delay our ability to replace the recalled devices in a timely manner. Moreover, if we do not adequately address problems associated with our devices, we may face additional regulatory enforcement action, including FDA warning letters, product seizure, injunctions, administrative penalties or civil or criminal proceedings.

Companies are required to maintain certain records of recalls, removals and corrections, even if they are not reportable to the FDA. We may initiate voluntary withdrawals, removals or corrections for our products in the future that we determine do not require notification of the FDA. If the FDA disagrees with our determinations, it could require us to report those actions and we may be subject to enforcement action. A future recall announcement could harm our reputation with customers, potentially lead to product liability claims against us and negatively affect our sales. Any corrective action, including product recall, will require the dedication of our time and capital and could harm our reputation and financial results.

In addition, the FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. For example, in December 2016, the 21st Century Cures Act, or Cures Act, was signed into law. The Cures Act, among other things, is intended to modernize the regulation of medical devices and spur innovation. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability, which would adversely affect our business, prospects, financial condition and results of operations.

We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. The Biden Administration may enact certain policies that may impact our business and industry. It is difficult to predict how potential executive actions affect the FDA's ability to exercise its regulatory authority. If potential executive actions impose constraints on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

Certain of our customers are highly dependent on payments from third-party payors, including government sponsored programs, in the U.S. and other countries in which we operate, and reductions in third-party coverage and reimbursement rates for our products (or services provided with our products) could adversely affect our business and results of operations.

A substantial portion of our revenue depends, in part, on the extent to which the costs of our products purchased by our customers are reimbursed by third-party payors, including Medicare, Medicaid, other U.S. government sponsored programs, non-U.S. governmental payors and private payors. Our customers' ability to obtain appropriate coverage and

reimbursement for products and services from these third-party payors affects the selection of products they purchase and the prices they are willing to pay. Many of our products are used in services that are often reimbursed by third-party payors as part of a global payment that covers all costs associated with providing that service. This means that healthcare providers incur costs purchasing these products but do not receive separate or additional reimbursement in connection with their use. As a result, certain healthcare providers may be reluctant to adopt our products. Similarly, our customers may not adopt our products if they are more costly than competitor products, including products used to provide alternative treatments. If we lower the prices for our products to obtain or maintain customers' business, we may be adversely affected financially. Similarly, our customers' ability to obtain appropriate productivity credit from their applicable internal administrations affects the selection of products they purchase and the prices they are willing to pay.

For some of our products, such as our Vapotherm Access remote physiologic monitoring ("RPM") products, our customers may receive additional reimbursement associated with those products. To the extent that third-party payors modify or eliminate coverage for the RPM products or reduce their reimbursement to our customers for their use of those products, our business may be adversely affected.

We face significant uncertainty in the industry due to government healthcare reform and other legislative action.

There have been and continue to be laws enacted by the federal government, state governments, regulators and third-party payors to control healthcare costs, and generally, to reform the healthcare system in the United States. For example, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the Healthcare Reform Act, substantially changed the way healthcare is delivered and financed by both governmental and private insurers. These changes included the creation of demonstration programs and other value-based purchasing initiatives that provide financial incentives for physicians and hospitals to reduce costs. We expect healthcare reform efforts to continue and we cannot predict whether additional reform proposals will be adopted, when they will be adopted, or what impact they may have on us, but any such proposals could have a negative impact on our business and provide incentives for hospitals and physicians to not use our products and services. General legislative action also may affect our business.

Consolidation in the healthcare industry, group purchasing organizations or integrated distributor networks could lead to demands for price concessions, which may affect our ability to sell our products at prices necessary to support our current business strategies.

Healthcare costs have risen significantly over the past decade, which has resulted in or led to numerous cost reform initiatives by legislators, regulators and third-party payors. Cost reform has triggered a consolidation trend in the healthcare industry to aggregate purchasing power, which may create more requests for pricing concessions in the future. Failure to meet these concessions may result in our exclusion from these contracts. Additionally, group purchasing organizations, independent delivery networks and large single accounts may continue to use their market power to consolidate purchasing decisions for hospitals by limiting the number of products available under various purchasing categories. We expect that market demand, government regulation, third-party coverage and reimbursement policies and societal pressures will continue to change the healthcare industry world-wide, resulting in further business consolidations and alliances among our customers, which may exert further downward pressure on the prices of our products.

As the healthcare system consolidates the number of health systems and group purchasing organizations controlling the buying process has also constricted. In order to sell to hospitals that belong to these organizations we must be on contract. Not being on contract with these organizations, or choices of these organizations to standardize on a competitive product option or otherwise decline to renew our contract, or the failure of these organizations to differentiate our new Precision Flow Hi-VNI system, which we fully launched in 2019 and is our first product to have the *de novo* expanded indication for use statement, from conventional heated humidified high flow oxygen devices could substantially reduce our revenue opportunity.

Legislative or regulatory reforms in the United States or other jurisdictions in which we market our products may make it more difficult and costly for us to obtain regulatory clearances or approvals for our products or to manufacture, market or distribute our products after clearance or approval is obtained.

From time to time, legislation is drafted and introduced in Congress that could significantly change the statutory provisions governing the regulation of medical devices. In addition, FDA and other regulatory authorities' regulations and guidance may be revised or reinterpreted in ways that may significantly affect our business and our products. Any new statutes, regulations or revisions or reinterpretations of existing regulations may impose additional costs or lengthen review times of any

future products or make it more difficult to obtain clearance or approval for, manufacture, market or distribute our products. We cannot determine what effect changes in regulations, statutes, legal interpretation or policies, when and if promulgated, enacted or adopted may have on our business in the future. Such changes could, among other things, require: additional testing prior to obtaining clearance or approval; changes to manufacturing methods; recall, replacement or discontinuance of our products; or additional record keeping.

On April 5, 2017, the European Parliament passed the Medical Devices Regulation (Regulation 2017/745), which repeals and replaces the EU Medical Devices Directive and the Active Implantable Medical Devices Directive. Unlike directives, which must be implemented into the national laws of the EEA member states, the regulations would be directly applicable, i.e., without the need for adoption of EEA member state laws implementing them, in all EEA member states and are intended to eliminate current differences in the regulation of medical devices among EEA member States. The Medical Devices Regulation, among other things, is intended to establish a uniform, transparent, predictable and sustainable regulatory framework across the EEA for medical devices and ensure a high level of safety and health while supporting innovation.

The Medical Devices Regulation became effective as of May 26, 2021. The new regulation among other things:

- strengthens the rules on placing devices on the market and reinforce surveillance once they are available;
- establishes explicit provisions on manufacturers' responsibilities for the follow-up of the quality, performance and safety of devices placed on the market;
- improves the traceability of medical devices throughout the supply chain to the end-user or patient through a unique identification number;
- sets up a central database to provide patients, healthcare professionals and the public with comprehensive information on products available in the European Union; and
- strengthened rules for the assessment of certain high-risk devices, such as implants, which may have to undergo an additional check by experts before they are placed on the market.

These modifications may have an effect on the way we conduct our business in the EEA.

We are subject to certain federal, state and foreign fraud and abuse laws, transparency laws and state licensure or permit laws which, if violated, could subject us to substantial penalties. Additionally, any challenge to or investigation into our practices under these laws could cause adverse publicity and be costly to respond to, and thus could harm our business.

There are numerous U.S. federal and state, as well as foreign, laws pertaining to healthcare fraud and abuse, including anti-kickback, false claims and transparency laws. Our business practices and interactions with physicians, hospitals and other healthcare providers are subject to scrutiny under these laws. The significant U.S. healthcare laws and regulations that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce either the referral of an individual or furnishing or arranging for a good or service, for which payment may be made, in whole or in part, under federal healthcare programs, such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation. Moreover, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act. Violations of the federal Anti-Kickback Statute may result in substantial civil or criminal penalties and exclusion from participation in government healthcare programs, including Medicare and Medicaid;
- the federal civil and criminal false claims laws, including the federal civil False Claims Act, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid or other federal healthcare programs that are false or fraudulent. Private individuals can bring False Claims Act "qui tam" actions, on behalf of the government and such individuals, commonly known as "whistleblowers," may share in amounts paid by the entity to the government in fines or settlement. When an entity is determined to have violated the federal civil False Claims Act, the government may impose substantial penalties plus three times the amount of damages which the government sustains because of the submission of a false claim, and exclude the entity from participation in Medicare, Medicaid and other federal healthcare programs;
- the Federal Physician Payments Sunshine Act or Open Payments which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under certain federal healthcare programs such as Medicare and Medicaid to report annually to the DHHS Centers for Medicare & Medicaid

Services, or CMS, information related to payments and other transfers of value to teaching hospitals and physicians, which term is defined broadly to include practitioners such as podiatrists and dentists, (and, beginning with transfers of value in 2021, to additional non-physician practitioners) as well as to report annually ownership and investment interests held by physicians and their immediate family members. Manufacturers are required to submit annual reports to CMS and failure to submit required information may result in substantial civil monetary penalties, and may result in liability under other federal laws or regulations;

- the HIPPA fraud and abuse provisions, which may impose criminal penalties for defrauding any healthcare benefit program, including public and private payors, or making any false statements relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- analogous state and foreign law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers or patients; state laws that require device companies to comply with the industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government or that otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws that require device companies to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and
- state laws that require medical device companies to obtain wholesale distribution or pharmacy permits and other state licensing laws.

More generally, these laws and regulations constrain our promotional and other business activities by limiting the kinds of financial interactions, including discount and other commercial transactions, we may have with individuals or entities that use, order, purchase or recommend our products such as patients and healthcare providers. We have a variety of arrangements with our customers that could implicate these laws and regulations. For example, like many medical device companies that have related capital and consumable products, we periodically permit customers that purchase the disposable component of our Precision Flow systems to use the capital component at no upfront cost as part of a bundled discount sale. A small percentage of our company is owned by healthcare professionals, and we also have also entered into consulting agreements with physicians, including some who influence the ordering of or use our products in procedures they perform. To facilitate product discussions, we also provide meals to healthcare practitioners who might use or order services using our products. We arrange for continuing education programs for healthcare practitioners to provide education about our products and the conditions our products are approved to treat. As another example, with federal RPM coverage requirements evolving, our customers may submit claims to federal payors for services furnished in connection with our RPM support services, which could result in some services not eligible for reimbursement being nonetheless billed to Medicare or Medicaid and therefore triggering False Claims Act liability. We could be adversely affected if regulatory agencies determine our financial interactions to be in violation of applicable laws. Due to the breadth of these laws, the narrowness of exceptions and/or safe harbors available, and the range of interpretations to which the laws are subject, it is possible that some of our current or future practices might be challenged under one or more of these laws.

To enforce compliance with the healthcare regulatory laws, certain enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Responding to investigations can be time-and resource-consuming and can divert management's attention from the business. Additionally, as a result of these investigations, healthcare companies or healthcare providers may have to agree to additional compliance and reporting requirements as part of a consent decree or corporate integrity agreement. Any such investigation or settlement could increase our costs or otherwise have an adverse effect on our business. Even an unsuccessful challenge or investigation into our practices could cause adverse publicity and be costly to respond to.

If our operations are found to be in violation of any of the healthcare laws or regulations described above or any other healthcare regulations that apply to us, we may be subject to penalties, including administrative, civil and criminal penalties, damages, fines, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, imprisonment, contractual damages, reputational harm, disgorgement and the curtailment or restructuring of our operations.

Risks Related to Our International Operations

Our international operations subject us to certain operating risks, which could adversely impact our results of operations and financial condition.

We focus our international commercial efforts in the United Kingdom, Germany, Brazil, Mexico, Spain, Italy, Israel, Japan and other international markets. Economic or political instability in any of these markets could have a significant impact on our operations. Additionally, the sale and shipment of our products across international borders, as well as the purchase of components from international sources, subjects us to U.S. and foreign governmental trade, import and export, and customs regulations and laws.

Compliance with these regulations and laws is costly and exposes us to penalties for non-compliance. Other laws and regulations that can significantly impact us include various anti-bribery laws, including the United Kingdom Bribery Act of 2010 and the U.S. Foreign Corrupt Practices Act, as well as sanctions and export controls laws. Any failure to comply with applicable legal and regulatory obligations could impact us in a variety of ways that include, but are not limited to, significant criminal, civil and administrative penalties, including imprisonment of individuals, fines and penalties, denial of export privileges, seizure of shipments, restrictions on certain business activities and exclusion or debarment from government contracting.

Our international operations expose us and our distributors to risks inherent in operating in foreign jurisdictions. These risks include:

- difficulties in enforcing our intellectual property rights and in defending against third-party threats and intellectual property enforcement actions against us, our distributors or any of our third-party suppliers;
- reduced or varied protection for intellectual property rights in some countries;
- pricing pressure that we may experience internationally;
- a shortage of high-quality salespeople, clinical educators and distributors;
- third-party reimbursement policies that may require some of the patients who receive our products to directly absorb medical costs or that may necessitate the reduction of the selling prices of our products;
- competitive disadvantage to competition with established business and customer relationships;
- the imposition of additional U.S. and foreign governmental controls or regulations;
- political or economic instability;
- changes in duties and tariffs, license obligations and other non-tariff barriers to trade;
- the imposition of restrictions on the activities of foreign agents, representatives and distributors;
- scrutiny by foreign tax authorities, which could result in significant fines, penalties and additional taxes being imposed on us;
- laws and business practices favoring local companies;
- longer payment cycles;
- difficulties in maintaining consistency with our internal guidelines;
- difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- the imposition of costly and lengthy new export licensing requirements;
- the imposition of U.S. or international sanctions against a country, company, person or entity with whom we do business that would restrict or prohibit continued business with the sanctioned country, company, person or entity; and
- the imposition of new trade restrictions.

If we experience any of these risks, our sales in non-U.S. jurisdictions may be harmed and our results of operations would suffer.

If we continue using foreign contract manufacturers, our operating results could be harmed by economic, political, regulatory and other factors in foreign countries.

We currently use foreign contract manufacturers and may continue to use foreign contract manufacturers to manufacture current and future products, where appropriate. These international operations are subject to inherent risks, which may adversely affect us, including, but not limited to:

- political and economic instability;
- high levels of inflation, historically the case in a number of countries in Asia;
- burdens and costs of compliance with a variety of foreign laws, regulations and sanctions;
- foreign taxes and duties;
- changes in tariff rates or other trade, tax or monetary policies; and
- changes or volatility in current exchange rates and interest rates.

If significant tariffs or other restrictions are placed on Chinese imports or any related counter-measures are taken by China, our revenue and results of operations may be materially harmed.

We contract with several Chinese suppliers for certain components of our Precision Flow systems. If significant tariffs or other restrictions are placed on Chinese imports or any related counter-measures are taken by China, our revenue and results of operations may be materially harmed. Recently, political discourse in the United States has increasingly focused on ways to discourage U.S. competitors from outsourcing manufacturing and production activities to foreign corporations and curb what are considered unfair trade practices. In January 2020, the United States and China entered into Phase One of the Economic and Trade Agreement between the United States of America and the People's Republic of China (the "Phase One Trade Agreement"). The Phase One Trade Agreement takes steps to ease certain trade tensions between the United States and China. Although the Phase One Trade Agreement is an encouraging sign of progress in the trade negotiations between the United States and China. However, according to the Peterson Institute for International Economics, China has purchased significantly less than its purchase commitment under the Phase One Trade Agreement. No further agreements have been reached and the impact of the Phase One Trade Agreement and any forthcoming trade deal cannot be determined at this time. If tariffs are imposed on the components used in our Precision Flow systems, we may be required to raise our prices, which may result in the loss of customers and harm our operating performance. Alternatively, we may seek to shift production outside of China, resulting in significant costs and disruption to our operations.

Efforts to withdraw from or materially modify the USMCA or other international trade agreements, to change tax provisions related to global manufacturing and sales or to impose new tariffs, economic sanctions or related legislation, any of which could adversely affect our financial condition and results of operations.

Our business benefits from free trade agreements, such as the United States-Mexico-Canada Agreement, or USMCA, and we also rely on various U.S. corporate tax provisions related to international commerce, as we develop, market and sell our products and services globally.

Any modification in these areas, any shift in the enforcement or scope of existing regulations or any change in the countries, governments, persons or technologies targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential end-customers with international operations and could result in increased costs. Any decreased use of our products or limitation on our ability to export or sell our products would likely adversely affect our business, financial condition and results of operations.

Our results may be impacted by changes in foreign currency exchange rates.

We have international operations, including a direct sales organization in the United Kingdom, and, as a result, an increase in the value of the U.S. dollar relative to foreign currencies could require us to reduce our selling price or risk making our products less competitive in international markets, or our costs could increase. Also, if our international sales increase, we may enter into a greater number of transactions denominated in non-U.S. dollars, which could expose us to increased foreign currency risks, including currency fluctuations and exchange rate risks. For example, following the acquisition of our former distributor, Solus Medical, on February 28, 2019, we began invoicing our United Kingdom customers directly in Great British Pounds. We do not currently engage in any hedging transactions. If we are unable to address these risks and challenges effectively, our international operations may not be successful, and our business could be harmed.

We could be adversely affected by violations of the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act of 2010 and similar world-wide anti-bribery laws.

The U.S. Foreign Corrupt Practices Act, or the FCPA, the U.K. Bribery Act of 2010 and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business. Our policies mandate compliance with these anti-bribery laws, including the requirements to maintain accurate information and internal controls. We operate in many parts of the world that have experienced governmental corruption to some degree and in certain circumstances; strict compliance with anti-bribery laws may conflict with local customs and practices. There is no assurance that our internal control policies and procedures will protect us from acts committed by our employees or agents. If we are found to be liable for FCPA or other violations (either due to our own acts or our inadvertence, or due to the acts or inadvertence of others), we could suffer from civil and criminal penalties or other sanctions, including contract cancellations or debarment, and loss of reputation, any of which could have a material adverse impact on our business, financial condition, and results of operations.

Risks Related to Our Intellectual Property

If we are unable to secure and maintain patent or other intellectual property protection for our products, we may lose a significant competitive advantage.

Our commercial success depends, in part, on obtaining, maintaining and defending patent and other intellectual property protection for the technologies used in our products. The patent positions of medical device companies, including ours, can be highly uncertain and involve complex and evolving legal and factual questions. The process of obtaining patent protection is expensive and time-consuming, and we may not be able to prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. We may choose not to seek patent protection for certain innovations or products and may choose not to pursue patent protection for certain products in certain jurisdictions or at all, and under the laws of certain jurisdictions, patents or other intellectual property rights may be unavailable or limited in scope and, in any event, any patent protection we obtain may be limited. As a result, some of our products are not, and in the future may not be, protected by patents. This may mean we may be unable to:

- prevent our competitors from duplicating our products;
- prevent our competitors from gaining access to our proprietary information and technology; or
- gain or maintain a competitive advantage.

We intend to seek additional patents, but our pending and future patent applications may not result in issued patents or be granted on a timely basis. In addition, issued patents may not contain claims sufficiently broad to protect us against third parties with similar technologies or products or provide us with any competitive advantage, including exclusivity in a particular product area. The scope of our patent claims also may vary between countries, as individual countries have distinctive patent laws. We may be subject to challenges by third parties regarding our intellectual property, including, among others, claims regarding validity, enforceability, scope and effective term. Patent prosecution, related proceedings, and litigation in the U.S. and in other countries may be expensive, time consuming and ultimately unsuccessful. In addition, patents issued by foreign countries may afford less protection than is available under U.S. patent law and may not adequately protect our proprietary information. Our competitors may independently develop proprietary technologies and processes that are the same as or substantially equivalent to ours or design around our patents. The technologies we have patented, licensed or developed. Moreover, the expiration of patents on which we rely for protection of key products could diminish our competitive advantage and adversely affect our business and our prospects. Consequently, competitors could develop, manufacture and sell products that directly compete with our products, which could decrease our sales and diminish our ability to compete.

Even if our patents are determined by the U.S. Patent and Trademark Office, USPTO, foreign patent office, or a court to be valid and enforceable, they may not be drafted or interpreted sufficiently broadly enough in scope to prevent others from marketing products and services similar to ours or designing around our patents. For example, third parties may be able to develop therapies, or make systems or devices, that are similar to ours but that are not covered by the claims of our patents. Third parties may assert that we or our licensors were not the first to make the inventions covered by our issued patents or pending patent applications. The claims of our issued patents or patent applications when issued may not cover our commercial technology or the future products and services that we develop. We may not have freedom to operate unimpeded by the patent rights of others. Third parties may have dominating, blocking or other patents relevant to our technology of which we are not aware. Because an originally filed patent application can be refiled to obtain continuation patents with new claims based on the priority date of the original application, we cannot be certain that our competitors will not file and obtain new continuation patents in an attempt to cover our commercial technology notwithstanding it having been available in the market for over 10

years. In addition, because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after the filing of certain priority documents (or, in some cases, are not published until they issue as patents) and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for our technology or our next generation contemplated technology. Any such patent applications may have priority over our patent applications or issued patents, which could further require us to obtain rights from third parties to issued patents or pending patent applications covering such technologies to allow us to commercialize our technology. If another party has filed a U.S. patent application on inventions similar to ours, depending on when the timing of the filing date falls under certain patent laws, we may have to participate in a priority contest (such as an interference proceeding) declared by the USPTO to determine priority of invention in the United States. There may be prior public disclosures of which we are not aware that could invalidate our patents or one or more claims of our patents. Further, we may not develop additional proprietary technologies and, even if we do, they may not be patentable.

Moreover, in the United States and in foreign jurisdictions, proceedings to enforce our patent rights could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, and our patent applications at risk of not issuing. Additionally, such proceedings could provoke third parties to assert claims against us, or they may assert such claims on their own. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful, or we may be required to pay damages and legal fees of our adversaries. Thus, we may not be able to stop a competitor from marketing and selling products that are the same as or similar to our products, and our competitive position would be harmed.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position may be harmed.

In addition to patent and trademark protection, we also rely on trade secrets, including unpatented manufacturing know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect our trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our consultants and vendors, or our former or current employees. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, however, any of these parties may breach the agreements and disclose our trade secrets and other unpatented or unregistered proprietary information, and once disclosed, we are likely to lose trade secret protection. Monitoring unauthorized uses and disclosures of our intellectual property is difficult, and we do not know whether the steps we have taken to protect our intellectual property will be effective. In addition, we may not be able to obtain adequate remedies for any such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to enforce trade secret protection.

Further, our competitors may independently acquire or develop know-how or other technology that is similar, equivalent, or superior to our proprietary technology. Competitors could purchase our products and attempt to replicate some or all of the competitive advantages we derive from our development efforts, willfully infringe our intellectual property rights, design around our protected technology, or develop their own competitive technologies that fall outside of our intellectual property rights. In addition, our key employees, consultants, suppliers or other individuals with access to our proprietary technology may incorporate that technology into projects and inventions developed independently or with third parties. As a result, disputes may arise regarding the ownership of the proprietary rights to such technology, and any such dispute may not be resolved in our favor. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology to compete with us and our competitive position could be adversely affected. If our intellectual property is not adequately protected so as to protect our market against competitors' products and methods, our competitive position could be adversely affected, as could our business.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented, declared generic or determined to be infringing on other marks. We may not be able to protect our rights in these trademarks and trade names, which we need in order to build name recognition with potential partners or customers in our markets of interest. In addition, third parties have registered trademarks similar and identical to our trademarks in both the United States and in foreign jurisdictions and may in the future file for registration of such trademarks. If they succeed in registering or developing common law rights in such trademarks, and if we were not successful in challenging such third-party rights, we may not be able to use these trademarks to market our products in those countries. In any case, if we are unable to establish name

recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected.

We may in the future become involved in lawsuits to defend ourselves against intellectual property disputes, which could be expensive and time consuming, and ultimately unsuccessful, and could result in the diversion of significant resources, and hinder our ability to commercialize our existing or future products.

Our success depends in part on not infringing the patents or violating other proprietary rights of others. Intellectual property disputes can be very costly to defend or affirmatively pursue, distract leadership, require financing, and may cause our business, operating results and financial condition to suffer. Significant litigation regarding patent rights occurs frequently in the medical device industry, and we intend to engage as necessary to defend our rights. Whether merited or not, it is possible that U.S. and foreign patents and pending patent applications controlled by third parties may be alleged to cover our products. We may also face allegations that our employees have misappropriated the intellectual property rights of their former employers or other third parties. Our competitors in both the United States and abroad, many of which have substantially greater resources and have made substantial investments in patent portfolios and competing technologies, may have applied for or obtained or may in the future apply for and obtain, patents that will prevent, limit, or otherwise interfere with our ability to commercialize our products. These competitors may have one or more patents for which they can threaten and/or initiate patent infringement actions against us, and we may have one or more patents for which we can threaten and/or initiate patent infringement actions against them. Our ability to defend ourselves or to affirmatively pursue such actions may be limited by our financial and human resources, the availability of reasonable defenses and claims, and the ultimate acceptance of our defenses and claims by the courts or juries. Further, if such patents are successfully asserted against us, this may result in an adverse impact on our business, including injunctions, damages, and/or attorneys' fees. From time to time and in the ordinary course of business, we may develop noninfringement and/or invalidity positions with respect to third-party patents, which may or may not be ultimately adjudicated as successful by a judge or jury if such patents were asserted against us.

We have and may receive in the future, particularly as a public company, communications from patent holders, including non-practicing entities, alleging infringement of patents, infringement of other intellectual property rights including misappropriation of trade secrets, offering licenses to such intellectual property, or challenging our intellectual property. For example in 2018 Stamford Devices Limited opposed our European patent—EP2806926 before the parties reached a settlement in 2019. Any claims that we assert against perceived infringers could also provoke these parties to assert counterclaims against us alleging that we infringe their intellectual property rights. At any given time, we may be involved as either a plaintiff or a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time.

The large number of patents, the rapid rate of new patent applications and issuances, the complexities of the technologies involved and the uncertainty of litigation significantly increase the risks and the costs related to any patent litigation. Any potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, making, using, or exporting products that use the disputed intellectual property;
- obtain a license from the intellectual property owner to continue selling, making, exporting, or using products, which license may require substantial payments and may not be available on reasonable terms, or at all;
- incur significant legal expenses;
- pay substantial damages or royalties to the party whose intellectual property rights we may be found to be infringing, potentially including treble damages if the court finds that the infringement was willful;
- if a license is available from a third-party, we may have to pay substantial royalties, upfront fees or grant cross-licenses to intellectual property rights for our products and services;
- pay the attorney fees and costs of litigation to the party whose intellectual property rights we may be found to be infringing;
- find non-infringing substitute products, which could be costly and create significant delay due to the need for FDA regulatory clearance;
- pay substantial damages to our customers or end users to discontinue use or replace infringing technology with non-infringing technology;
- lose the opportunity to opportunity to successfully protect our intellectual property and assert it against others;
- find alternative supplies for infringing products or processes, which could be costly and create significant delay due to the need for FDA regulatory clearance; or

- redesign those products or processes that infringe any third-party intellectual property, which could be costly, disruptive, and/or infeasible.

From time to time, we may affirmatively engage in or be subjected to legal proceedings and claims in the ordinary course of business with respect to intellectual property. Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of our common stock. Finally, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations.

If any of the foregoing occurs, we may have to withdraw existing products from the market or may be unable to commercialize one or more of our products, all of which could have a material adverse effect on our business, results of operations and financial condition.

In addition, we may indemnify our customers, suppliers and international distributors against claims relating to the infringement of the intellectual property rights of third parties relating to our products, methods, and/or manufacturing processes. Third parties may assert infringement claims against our customers, suppliers, or distributors. These claims may require us to initiate or defend protracted and costly litigation on behalf of our customers, suppliers or distributors, regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of our customers, suppliers, or distributors or may be required to obtain licenses for the products they use. If we cannot obtain all necessary licenses on commercially reasonable terms, our customers may be forced to stop using our products, or our suppliers may be forced to stop providing us with products.

Similarly, interference or derivation proceedings provoked by third parties or brought by the USPTO or any foreign patent authority may be necessary to determine the priority of inventions or other matters of inventorship with respect to our patents or patent applications. We may also become involved in other contested proceedings, such as re-examination, inter parties review, or opposition proceedings, before the USPTO or its foreign counterparts relating to our intellectual property or the intellectual property rights of others. An unfavorable outcome in any such proceedings could require us to cease using the related technology or to attempt to license rights to it from the prevailing party or could cause us to lose valuable intellectual property rights. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms, if any license is offered at all. Litigation or other proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees.

We are subject to various laws protecting the confidentiality and security of certain personal information, and our failure to comply could result in penalties and reputational damage.

Our Company is subject to various laws and regulations protecting the confidentiality and security of certain patient health information, and our failure to comply with such laws and regulations could result in penalties and reputational damage.

Within the United States, numerous federal and state laws, including, without limitation, HIPAA, state data privacy laws (for example, the CPPA), state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws, govern the collection, use, disclosure and storage of personal information. Compliance with HIPAA and state data privacy law equivalents is particularly relevant for HGE. HGE is a business associate of its HIPAA covered entity customers by virtue of receiving individually identifiable health information (referred to as “Protected Health Information” or “PHI”) from these customers. In its business associate relationships, HGE must comply with applicable HIPAA requirements, state data privacy and security requirements, and the contractual terms of our business associate agreements that govern its permitted uses and disclosures of PHI received from the covered entity counterparty.

Outside the United States, numerous countries in which we operate, manufacture and sell our products have, or are developing, laws protecting data privacy and the confidentiality of certain personal data. For example, the European Union (“EU”) General Data Protection Regulation (“GDPR”), which became effective on May 25, 2018, introduced new data protection requirements in the EEA, and substantial fines for violations of the data protection rules. The GDPR expanded significantly the jurisdictional reach of EEA data protection law by extending the law’s application to not only entities that are established in the EEA, but also to entities that process personal data in connection with the offering of goods or services to data subjects located in the EEA or process personal data in connection with monitoring the behavior of data subjects located in the EEA. The GDPR imposes strict obligations and restrictions on controllers and processors of personal data including, for example, expanded disclosures about how personal data is to be used, increased requirements pertaining to health data and pseudonymised (e.g., key-coded) data, mandatory data breach notification requirements, appointment of a data protection

officer when sensitive personal data (e.g., health data) are processed on a large scale, requirement to enter into certain types of contracts with service providers processing personal data, implementation of appropriate privacy governance measures, and expanded rights for individuals over their personal data. This could affect our ability to collect, analyze and transfer personal data, including health data from clinical trials and adverse event reporting, or could cause our costs to increase, potentially leading to harm to our business and financial condition.

While the GDPR, as a directly effective regulation, was designed to harmonize data protection laws across the EEA, it does permit member states to legislate in many areas (particularly with regard to the processing of genetic, biometric or health data), meaning that inconsistencies between different member states will still arise. EEA member states have their own regimes on medical confidentiality and national and EEA-level guidance on implementation and compliance practices is often updated or otherwise revised, which adds to the complexity of processing personal data in the EEA.

Failure to comply with the requirements of the GDPR and the related national data protection laws of the EEA Member States, which may deviate from the GDPR, may result in substantial fines, and in addition to such fines, we may be the subject of litigation initiated by data subjects and/or adverse publicity, which could have a material adverse effect on our reputation and business. As a result of the implementation of the GDPR, we are required to put in place additional mechanisms to ensure compliance with the new data protection rules. For example, the GDPR requires us to make more detailed disclosures to data subjects, requires disclosure of the legal basis on which we can process personal data, may make it harder for us to obtain valid consent for processing, will require the appointment of a data protection officer where sensitive personal data (e.g., health data or data concerning race or ethnicity) is processed on a large scale, introduces mandatory data breach notification requirements throughout the EEA, imposes additional obligations on us when we are contracting with service providers and requires us to adopt appropriate privacy governance including policies, procedures, and training.

European data protection law generally prohibits the transfer of personal data to countries outside of the EEA that are not considered by the European Commission to provide an adequate level of data protection, unless there are specific frameworks or mechanisms in place to safeguard the data, such as the EU-U.S. Privacy Shield or the European Commission-approved standard contractual clauses, or very narrow legal exceptions (such as explicit consent of the data subject) apply. There is currently litigation challenging the EU-U.S. Privacy Shield and the standard contractual clauses, and it is uncertain whether these data transfer mechanisms will be invalidated by the European courts. We could be impacted by changes in law as a result of a future review of these transfer mechanisms by European regulators under the GDPR, as well as current challenges to these mechanisms in the European courts.

Outside of the EEA, the legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues that may affect our business. There is a degree of uncertainty associated with the legal and regulatory environment around privacy and data protection laws, which continue to develop in ways we cannot predict, including with respect to evolving technologies, such as cloud computing. Privacy and data protection laws may be interpreted and applied inconsistently from country to country and impose inconsistent or conflicting requirements. Varying jurisdictional requirements could increase the costs and complexity of compliance or require us to change our business practices in a manner adverse to our business. A determination that we have violated privacy or data protection laws could result in significant damage awards, fines and other penalties that could, individually or in the aggregate, materially harm our business and reputation.

Changes in patent law could diminish the value of patents in general, thereby impairing our ability to protect our existing and future products.

Patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include, among other things, provisions that affect the way patent applications are prosecuted, redefine prior art, establish specific venues and procedures for litigating patent validity, and switched the United States patent system from a “first-to-invent” system to a “first-to-file” system. The Leahy-Smith Act and its interpretation and implementation are still evolving and could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

In addition, patent reform legislation may pass in the future that could lead to additional uncertainties and increased costs surrounding the prosecution, enforcement and defense of our patents and applications. Furthermore, the U.S. Supreme Court and the U.S. Court of Appeals for the Federal Circuit have made, and may continue to make, changes in how the patent laws of the United States are interpreted. Similarly, foreign courts have made, and may continue to make, changes in how the

patent laws in their respective jurisdictions are interpreted. We cannot predict future changes in the interpretation of patent laws or changes to patent laws that might be enacted into law by United States and foreign legislative bodies. Those changes may materially affect our patents or patent applications and our ability to obtain additional patent protection in the future.

Obtaining and maintaining patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment, and other similar provisions during the patent application process. In addition, periodic maintenance fees on issued patents often must be paid to the USPTO and foreign patent agencies over the lifetime of the patent. While an unintentional lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to maintain the patents and patent applications covering our products or procedures, we may not be able to stop a competitor from marketing products that are the same as or similar to our own, which would have a material adverse effect on our business.

Patent terms may be inadequate to protect our competitive position on our products for an adequate amount of time.

Patents have a limited lifespan, and the protection any patent affords is limited. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. For any patents we have that cover our products (or new patents we obtain), once the patent life has expired we may be open to competition from competitive devices and services. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing devices or services that compete with ours.

We may not be able to adequately protect our intellectual property rights throughout the world.

Currently, our intellectual property portfolio includes numerous issued patents and pending patent applications that relate to our platform technology. Filing, prosecuting and defending patents on our products in all countries throughout the world would be prohibitively expensive. The requirements for patentability differ in certain countries, particularly developing countries, and the breadth of patent claims allowed can be inconsistent. In addition, the laws of some foreign countries may not protect our intellectual property rights to the same extent as laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories in which we have no have patent protection or our protection is insufficient to terminate infringing activities.

We may not have patent rights in certain foreign countries in which a market may exist. Moreover, in jurisdictions where we do have patent rights, proceedings to enforce such rights could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, and our patent applications at risk of not issuing. Additionally, such proceedings could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Thus, we may not be able to stop a competitor from marketing and selling products that are the same as or similar to our products, and our competitive position in the international market would be harmed.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of our competitors or are in breach of non-competition or non-solicitation agreements with our competitors.

We could in the future be subject to claims that we or our employees have inadvertently or otherwise used or disclosed alleged trade secrets or other proprietary information of former employers or competitors. Although we have procedures in place that seek to prevent our employees and consultants from using the intellectual property, proprietary information, know-how or trade secrets of others in their work for us, we may in the future be subject to claims that we caused an employee to breach the terms of his or her non-competition or non-solicitation agreement, or that we or these individuals have, inadvertently or otherwise, used or disclosed the alleged trade secrets or other proprietary information of a former employer or competitor. Litigation may be necessary to defend against these claims. Even if we are successful in defending

against these claims, litigation could result in substantial costs and could be a distraction to management. If our defense to those claims fails, in addition to paying monetary damages, a court could prohibit us from using technologies or features that are essential to our products, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers. An inability to incorporate technologies or features that are important or essential to our products would have a material adverse effect on our business and may prevent us from selling our products or from practicing our processes. In addition, we may lose valuable intellectual property rights or personnel. Moreover, any such litigation or the threat thereof may adversely affect our ability to hire employees or contract with independent sales representatives. A loss of key personnel or their work product could hamper or prevent our ability to commercialize our products, which could have an adverse effect on our business, results of operations and financial condition.

Risks Related to Our Indebtedness and Need for Additional Capital

Our substantial indebtedness may have a material adverse effect on our business, results of operations and financial condition.

We have a significant amount of indebtedness. As of December 31, 2021, we had $40.0 million of aggregate principal amount of term loans and $6.6 million of aggregate amount or revolving loans outstanding under our Loan and Security Agreement with Canadian Imperial Bank of Commerce (the "CIBC Loan Agreement").

On February 18, 2022 (the "Effective Date) we entered into a Loan and Security Agreement with SLR Investment Corporation (the "Loan Agreement") which provides for a term loan A facility of $100.0 million (the "Term Loan A Facility") and a term loan B facility of $25.0 million (the "Term Loan B Facility"). The Term Loan A Facility was funded to the Company on the Effective Date. The Term Loan B Facility will be available to the Company following the Effective Date upon achievement of a certain minimum revenue level. The proceeds of the Term Loan A Facility were used to pay off all obligations owing under, and to terminate the CIBC Loan Agreement.

Our substantial level of indebtedness increases the risk that we may be unable to generate cash sufficient to pay amounts due in respect of our indebtedness. Our substantial indebtedness could have other important consequences to our debt holders and significant effects on our business. For example, it could:

- increase our vulnerability to adverse changes in general economic, industry and competitive conditions;
- require us to dedicate a substantial portion of our cash flow from operations to making payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- expose us to the risk of increased interest rates as certain of our borrowings are at variable rates, and we may not be able to enter into interest rate swaps and any swaps we enter into may not fully mitigate our interest rate risk;
- restrict us from capitalizing on business opportunities;
- make it more difficult to satisfy our financial obligations, including payments on our indebtedness;
- place us at a competitive disadvantage compared to our competitors that have less debt; and
- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions, debt service requirements, execution of our business strategy or other general corporate purposes.

In addition, our indebtedness under the Loan Agreement is secured by substantially all of our assets, including our intellectual property, and the Loan Agreement contains restrictive covenants that limit our ability to engage in activities that may be in our long-term best interests. Our failure to comply with those covenants could result in an event of default that, if not cured or waived, could result in the acceleration of all of our indebtedness.

We will require a significant amount of cash to service our debt, and our ability to generate cash depends on many factors beyond our control, and any failure to meet our debt service obligations could materially adversely affect our business, results of operations and financial condition.

Our ability to make payments on and to refinance our indebtedness and to fund working capital needs and planned capital expenditures will depend on our ability to generate cash in the future. This, to a certain extent, is subject to general economic, financial, competitive, business, legislative, regulatory and other factors that are beyond our control.

If our business does not generate sufficient cash flow from operations or if future borrowings are not available to us in an amount sufficient to enable us to pay our indebtedness or to fund our other liquidity needs, we may need to refinance all or a portion of our indebtedness on or before the maturity thereof, sell assets, reduce or delay capital investments or seek to raise additional capital, any of which could have a material adverse effect on our business, results of operations and financial condition. In addition, we may not be able to affect any of these actions, if necessary, on commercially reasonable terms or at all. Our ability to restructure or refinance our indebtedness will depend on the condition of the capital markets and our financial condition at such time. Any refinancing of our debt could be at higher interest rates and may require us to comply with more onerous covenants, which could further restrict our business operations. The terms of existing or future debt instruments, including the Loan Agreement, may limit or prevent us from taking any of these actions. In addition, any failure to make scheduled payments of interest and principal on our outstanding indebtedness would likely result in a reduction of our credit rating, which could harm our ability to incur additional indebtedness on commercially reasonable terms or at all. Our inability to generate sufficient cash flow to satisfy our debt service obligations, or to refinance or restructure our obligations on commercially reasonable terms or at all, would have an adverse effect, which could be material, on our business, results of operations and financial condition, as well as on our ability to satisfy our obligations in respect of the Loan Agreement and our other indebtedness.

Our failure to comply with our Loan Agreement relating to our outstanding indebtedness, including as a result of events beyond our control, could result in an event of default that could materially adversely affect our business, results of operations and financial condition.

If there were an event of default under our Loan Agreement relating to our outstanding indebtedness, the holders of the defaulted debt could cause all amounts outstanding with respect to that debt to be due and payable immediately. We cannot guarantee that our assets or cash flow would be sufficient to fully repay borrowings under our outstanding debt instruments if accelerated upon an event of default.

Further, if we are unable to repay, refinance or restructure our indebtedness under our secured debt, the holders of such debt could proceed against the collateral securing that indebtedness. In addition, any event of default or declaration of acceleration under one debt instrument could also result in an event of default under one or more of our other debt instruments.

As a result, any default by us on our indebtedness could have a material adverse effect on our business, results of operations and financial condition.

The Loan Agreement restricts our current and future operations, particularly our ability to respond to changes or to take certain actions.

The Loan Agreement provides that all indebtedness thereunder is secured by substantially all of our assets, including our intellectual property, and imposes significant operating and financial restrictions and limits our ability and our other subsidiaries' ability to, among other things:

- incur additional indebtedness and guarantee indebtedness;
- pay dividends or make other distributions in respect of, or repurchase or redeem, capital stock;
- enter into any new line of business not reasonably related to our existing business;
- pay, prepay, redeem or repurchase certain debt;
- make loans and investments;
- sell or otherwise dispose of assets or enter into sale and lease-back transactions;
- incur liens;
- enter into transactions with affiliates;
- make capital expenditures;
- make any significant changes in accounting treatment or reporting practices;
- amend, modify or terminate material agreements and organizational documents;
- enter into certain inbound and outbound licenses; and
- consolidate, merge or sell all or substantially all of our assets.

As a result of these covenants and restrictions, we are and will be limited in how we conduct our business, and we may be unable to raise additional debt or equity financing to compete effectively or to take advantage of new business opportunities. In addition, our Loan Agreement requires us to comply with a minimum revenue covenant measured at the end of each month. The operating and financial restrictions and covenants in the Loan Agreement, as well as any future financing agreements that we may enter into, may restrict our ability to finance our operations, engage in business activities or expand or fully pursue our business strategies. Our ability to comply with these covenants may be affected by events beyond our control, and we may not be able to meet those covenants. We cannot guarantee that we will be able to maintain compliance with these covenants in the future and, if we fail to do so, that we will be able to obtain waivers from the lenders and/or amend the covenants.

Our failure to comply with the restrictive covenants as well as others contained in our future debt instruments from time to time could result in an event of default, which, if not cured or waived, could result in our being required to repay these borrowings before their due date. If we are forced to refinance these borrowings on less favorable terms, our business, results of operations and financial condition could be adversely affected.

We may need to raise additional capital to fund our existing commercial operations, develop and commercialize new products and expand our operations.

Based on our current business plan, we believe our current cash, borrowing capacity under our credit facilities and cash receipts from sales of our products will be sufficient to meet our anticipated cash requirements for at least the next 12 months. If our available cash balances, borrowing capacity, cash receipts and anticipated cash flow from operations are insufficient to satisfy our liquidity requirements, including because of lower demand for our products as a result of the risks described in this Annual Report on Form 10-K, we may, among other things, seek to sell common or preferred equity, convertible debt securities, or enter into new or amend existing credit facilities.

Additionally, we may consider raising additional capital in the future to expand our business, to pursue strategic investments, to take advantage of financing opportunities or for other reasons, including to:

- increase our sales and marketing efforts to increase market adoption of our products and address competitive developments;
- provide for supply and inventory costs associated with plans to accommodate potential increases in demand for our products;
- fund development and marketing efforts of any future products or additional features to then-current products;
- acquire, license or invest in new technologies;
- acquire or invest in complementary businesses or assets; and
- finance capital expenditures and general and administrative expenses.

Our present and future funding requirements will depend on many factors, including:

- our ability to achieve and sustain revenue growth and improve gross margins;
- the cost of expanding our operations and offerings, including our sales and marketing efforts;
- our rate of progress in, and cost of the sales and marketing activities associated with, establishing adoption of our products;
- the cost of research and development activities;
- the effect of competing technological and market developments;
- costs related to international expansion; and
- the potential cost of and delays in product development as a result of any regulatory oversight applicable to our products.

Additional capital may not be available at such times or in amounts as needed by us. Even if capital is available, it might be available only on unfavorable terms. Any additional equity or convertible debt financing into which we enter could be dilutive to our existing stockholders. Any future debt financing into which we enter will be senior in bankruptcy to our common stock and may impose covenants upon us that restrict our operations, including limitations on our ability to incur liens or additional debt, pay dividends, repurchase our stock, make certain investments and engage in certain merger, consolidation

or asset sale transactions. Any debt financing or additional equity that we raise may contain terms that are not favorable to our stockholders or us. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products or grant licenses on terms that are not favorable to us. If access to sufficient capital is not available as and when needed, our business will be materially impaired and we may be required to cease operations, curtail one or more product development or commercialization programs, or we may be required to significantly reduce expenses, sell assets, seek a merger or joint venture partner, file for protection from creditors or liquidate all our assets.

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- the potential cost of and delays in product development as a result of any regulatory oversight applicable to our products.

Additional capital may not be available at such times or in amounts as needed by us. Even if capital is available, it might be available only on unfavorable terms. Any additional equity or convertible debt financing into which we enter could be dilutive to our existing stockholders. Any future debt financing into which we enter will be senior in bankruptcy to our common stock and may impose covenants upon us that restrict our operations, including limitations on our ability to incur liens or additional debt, pay dividends, repurchase our stock, make certain investments and engage in certain merger, consolidation or asset sale transactions. Any debt financing or additional equity that we raise may contain terms that are not favorable to our stockholders or us. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products or grant licenses on terms that are not favorable to us. If access to sufficient capital is not available as and when needed, our business will be materially impaired and we may be required to cease operations, curtail one or more product development or commercialization programs, or we may be required to significantly reduce expenses, sell assets, seek a merger or joint venture partner, file for protection from creditors or liquidate all our assets.

Risks Related to Our Common Stock

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.

The trading price of our common stock may be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. During 2021, the sales price of our common stock ranged from $17.01 to $36.52. Factors that could cause volatility in the market price of our common stock include, but are not limited to:

- actual or anticipated fluctuations in our financial condition and operating results;
- actual or anticipated changes in our growth rate relative to our competitors;
- commercial success and market acceptance of our products;
- success of our competitors in developing or commercializing products;
- ability to commercialize or obtain regulatory approvals for our products, or delays in commercializing or obtaining regulatory approvals;
- strategic transactions undertaken by us;
- additions or departures of key personnel;
- product liability claims;
- prevailing economic conditions;
- disputes concerning our intellectual property or other proprietary rights;
- FDA or other U.S. or foreign regulatory actions affecting us or the healthcare industry;
- healthcare reform measures in the United States;
- sales of our common stock by our officers, directors or significant stockholders;
- future sales or issuances of equity or debt securities by us;
- international trade disputes;
- international political and economic instability, including wars with foreign countries;
- domestic political and economic instability;
- business disruptions caused by earthquakes, fires or other natural disasters; and
- issuance of new or changed securities analysts' reports or recommendations regarding us.

In addition, the stock market in general, and the market for companies like ours in particular, have from time to time experienced extreme volatility that has been often unrelated to the operating performance of particular companies. A certain degree of stock price volatility can be attributed to being a newly public company and could result in time consuming and costly regulatory inquiries. These broad market and industry fluctuations may negatively impact the price or liquidity of our common stock, regardless of our operating performance. For these reasons, we believe comparisons of our financial results from various reporting periods are not necessarily meaningful and should not be relied upon as an indication of our future performance.

We have incurred and expect to continue to incur significant costs as a result of operating as a public company and our management expects to devote substantial time to public company compliance programs.

To comply with the requirements imposed on us as a public company, we have incurred and expect to continue to incur significant legal, insurance, accounting and other expenses. We have invested and intend to continue to invest resources to comply with evolving laws, regulations and standards, and this investment will result in increased general and administrative expenses and may divert management's time and attention from product development activities. These laws, regulations and standards are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their

application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters, enforcement proceedings and higher costs necessitated by ongoing revisions to disclosure and governing practices. The costs associated with maintaining directors' and officers' insurance has risen and may continue to rise in the future, which may require us to accept reduced coverage, increased deductibles or incur substantially higher costs to obtain coverage. We also expect the rules and regulations associated with being a public company to make it more expensive for us to maintain directors' and officers' insurance. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that information required to be disclosed in reports under the Securities Exchange Act of 1934, as amended, is accumulated and communicated to our principal executive and financial officers. Any failure to develop or maintain effective controls could adversely affect the results of our periodic management evaluations or our ability to obtain attestation reports from our independent registered public accounting firm. In the event that we are not able to demonstrate compliance with the Sarbanes-Oxley Act, that our internal control over financial reporting is perceived as inadequate, or that we are unable to produce timely or accurate financial statements, investors may lose confidence in our operating results and the price of our common stock could decline. In addition, if we are unable to continue to meet these requirements, our common stock may not be able to remain listed on the NYSE.

As of December 31, 2020, we no longer qualified as an "emerging growth company," and the reduced disclosure requirements applicable to emerging growth companies no longer apply to us. As a result, we expect to incur additional expenses and devote substantial management effort toward ensuring compliance with those additional requirements applicable to companies that are not emerging growth companies, including the auditor attestation requirements for internal controls. Compliance with these additional laws, rules and regulations will increase our legal and financial compliance costs, make some activities more difficult, time consuming or costly and increase demand on our systems and resources. In addition, management's attention may be diverted from other business concerns and our costs and expenses will increase, which could harm our business and operating results. We may also need to hire more employees in the future or engage additional outside consultants to comply with these requirements, which would increase our costs and expenses.

Beginning last year, our independent registered public accounting firm is required to formally attest to the effectiveness of our internal control over financial reporting since we are no longer an "emerging growth company," as defined in the JOBS Act. We cannot assure you that there will not be material weaknesses in our internal controls in the future.

We may be subject to securities litigation, which is expensive and could divert our management's attention.

The market price of our securities may be volatile, and in the past companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns.

Our management and their respective affiliates own a significant percentage of our common stock and are able to exercise significant influence over matters subject to stockholder approval.

As of December 31, 2021, our executive officers and directors, together with their respective affiliates, beneficially owned approximately 10.4% of our common stock, including shares subject to outstanding options, restricted stock units and warrants that are exercisable within 60 days after such date. Accordingly, our management is able to exert a significant degree of influence over our affairs and over matters requiring stockholder approval, including the election of our board of directors and approval of significant corporate transactions. This concentration of ownership could have the effect of entrenching our management or board of directors, delaying or preventing a change in our control or otherwise discouraging a potential acquirer from attempting to obtain control of us, which in turn could have a material and adverse effect on the fair market value of our common stock.

A significant portion of our total outstanding shares may be sold into the public market at any time, which could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the market perception that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. We have also registered all shares of common stock that we may issue under our equity compensation plans. These shares can be freely sold in the public market subject to volume limitations applicable to affiliates. If any of these shares are sold, or if it is perceived that they will be sold, the market price of our common stock could decline.

Moreover, certain holders of our common stock have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If such holders, by exercising their registration rights, cause a large number of securities to be registered and sold into the public market, these sales could have an adverse effect on the market price for our common stock.

We do not anticipate paying any cash dividends on our common stock in the foreseeable future; therefore, capital appreciation, if any, of our common stock will be the sole source of gain for our stockholders for the foreseeable future.

We have never declared or paid any cash dividends on our common stock and do not intend to do so in the foreseeable future. We currently intend to retain all available funds and any future earnings to finance the growth and development of our business. In addition, our Loan Agreement contains and the terms of any future credit agreements 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 the sole source of gain for our stockholders for the foreseeable future.

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. As a recently public company, we may be slow to attract securities and industry analysts coverage. If no or a limited number of securities or industry analysts commence coverage of the Company, the price for our common stock could be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about our business, our stock price could decline. In addition, if our operating results fail to meet the forecast of analysts, our stock price could decline. If one or more of these analysts cease coverage of the Company or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our stock price and trading volume to decline.

Provisions in our amended and restated certificate of incorporation, our amended and restated bylaws and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders and may prevent attempts by our stockholders to replace or remove our current management.

Our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law contain provisions that may have the effect of discouraging, delaying or preventing a change in control of us or changes in our management that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. Our amended and restated certificate of incorporation and amended and restated bylaws, include provisions that:

- authorize “blank check” preferred stock, which could be issued by our board of directors without stockholder approval and may contain voting, liquidation, dividend and other rights superior to our common stock;
- create a classified board of directors whose members serve staggered three-year terms;
- specify that special meetings of our stockholders can be called only by our board of directors;
- prohibit stockholder action by written consent;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;

- provide that our directors may be removed only for cause;
- specify that no stockholder is permitted to cumulate votes at any election of directors;
- expressly authorized our board of directors to modify, alter or repeal our amended and restated bylaws; and
- require supermajority votes of the holders of our common stock to amend specified provisions of our amended and restated certificate of incorporation and amended and restated bylaws.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock.

In addition, because we are incorporated in the State of Delaware, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware, or the DGCL, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Any provision of our amended and restated certificate of incorporation, amended and restated bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

Our amended and restated certificate of incorporation designates exclusive forums for various actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that, subject to limited exceptions, the state or federal courts within the State of Delaware will be exclusive forums for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws, (4) any action to interpret, apply, enforce or determine the validity of our amended and restated certificate of incorporation or our amended and restated bylaws, or (5) any other action asserting a claim against us that is governed by the internal affairs doctrine. Further, our amended and restated certificate of incorporation provides that, subject to limited exceptions, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended.

Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our amended and restated certificate of incorporation described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our amended and restated certificate of incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition. For example, the Court of Chancery of the State of Delaware recently determined that a provision stating that federal district courts of the United States are the exclusive forum for resolving any complaint asserting a cause of action under the Securities Act of 1934, as amended, is not enforceable. However, this decision may be reviewed and ultimately overturned by the Delaware Supreme Court.

General Risk Factors

Our operations, and those of our suppliers and customers, are vulnerable to interruption or loss due to natural or other disasters, power loss, strikes and other events beyond our control.

Our principal executive office, U.S. distribution, and manufacturing operations are located in a leased facility located in Exeter, New Hampshire. We also have access to facilities for Solus personnel and HGE's personnel as well as facilities for inventory and a manufacturing and distribution site in Tilburg, Netherlands. These facilities and the manufacturing equipment we use to produce our products would be difficult to replace and could require substantial lead-time to repair or

replace in the event of a natural or man-made disaster. A disaster (such as an earthquake, fire, flood, hurricane, a volcanic eruption other severe weather, or a pandemic or other outbreak) affecting our facilities, or those of our suppliers, could significantly disrupt our operations, and delay or prevent product shipment or installation during the time required to repair, rebuild or replace the damaged facilities.

Even if we are able to quickly respond to a disaster, the ongoing effects of the disaster could create some uncertainty in the operations of our business. Our customers' facilities could also be negatively impacted by a disaster, which could delay shipments of our products. Additionally, customers may delay purchases of our products until their operations return to normal.

In addition, our facilities may be subject to a shortage of available electrical power and other energy supplies. Any shortages may increase our costs for power and energy supplies or could result in blackouts, which could disrupt the operations of our affected facilities and harm our business. In addition, concerns about terrorism, the effects of a terrorist attack, political turmoil or an outbreak of epidemic diseases could have a negative effect on our operations, those of our suppliers and customers.

If we experience significant disruptions in our information technology systems, our business may be adversely affected.

We depend on our information technology systems for the efficient functioning of our business, including customer management, accounting, data storage, compliance, purchasing and inventory management. We do not have redundant systems at this time. While we will attempt to mitigate interruptions, we may experience difficulties in implementing system upgrades, or experience difficulties in operating our business during the upgrade, either of which could disrupt our operations, including our ability to timely ship and track product orders, project inventory requirements, manage our supply chain and otherwise adequately service our customers. In the event we experience significant disruptions as a result of the current implementation of our information technology systems, we may be unable to repair our systems in an efficient and timely manner. Accordingly, such events may disrupt or reduce the efficiency of our entire operation and have a material adverse effect on our results of operations and cash flows. Currently we carry business interruption coverage to mitigate any potential losses, but we cannot be certain that such potential losses will not exceed our policy limits.

We are increasingly dependent on sophisticated information technology for our infrastructure, particularly with respect to HGE. Our information systems require an ongoing commitment of significant resources to maintain, protect and enhance existing systems. While we implemented security measures relating to our operations, consistent with the Health Insurance Portability and Accountability Act ("HIPAA") as amended by Health Information Technology for Economic and Clinical Health "HITECH") Act and their implementing regulations (collectively "HIPAA"), those measures may not always prevent security breaches that could harm our business. Advances in computer capabilities, inadequate technology or facility security measures or other factors may result in a compromise or breach of our systems and the data we store and process. Our security measures may be breached as a result of actions by third parties or employee error or malfeasance. A party who is able to circumvent our security measures or exploit inadequacies in our security measures, could, among other things, misappropriate proprietary information, including information about third parties, cause the loss or disclosure of some or all of this information, cause interruptions in our operations or expose third parties to computer viruses or other disruptions or vulnerabilities. Any compromise of our systems or the data we store or process could result in a loss of confidence in the security of our software, damage our reputation, disrupt our business, lead to legal liability and adversely affect our results of operations. Moreover, a compromise of our systems could remain undetected for an extended period of time, exacerbating the impact of that compromise. Actual or perceived vulnerabilities may lead to claims against us by our customers, or other third parties, including the federal and state governments. While our business agreements typically contain provisions that seek to limit our liability, there is no assurance these provisions will be enforceable and effective under applicable law. In addition, the cost and operational consequences of implementing further data protection measures could be significant.

We have in the past and may in the future be subject to various litigation claims and legal proceedings.

We have in the past and we, as well as certain of our officers and distributors, may in the future be subject to various litigation or other claims or lawsuits. The outcomes of legal actions are not within our complete control and may not be known for prolonged periods of time. In some actions, claimants may seek damages. Future claimants including suppliers, customers, distributors, competitors, officers or shareholders, among others, may also seek other civil or criminal remedies (including royalties or injunctions barring the sale of products that are subject of the proceeding) in the future. Regardless of the outcome, these lawsuits may result in significant legal fees and expenses, could divert management's time and other resources and could cause us reputational harm. If the claims contained in these lawsuits are successfully asserted against us, we could be liable for damages and be required to alter or cease certain of our business practices or product lines.

Employment litigation and unfavorable publicity could negatively affect our future business.

Employees may, from time to time, bring lawsuits against us regarding injury, creating a hostile workplace, discrimination, wage and hour, sexual harassment and other employment issues. In recent years there has been an increase in the number of discrimination and harassment claims generally. Coupled with the expansion of social media platforms and similar devices that allow individuals access to a broad audience, these claims have had a significant negative impact on some businesses. Companies that have faced employment or harassment related lawsuits have had to terminate management or other key personnel and have suffered reputational harm that has negatively impacted their sales. If we were to face any employment related claims, our business could be negatively affected.

Our insurance policies are expensive and protect us only from some business risks, which will leave us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include general liability, foreign liability, employee benefits liability, property, umbrella, workers' compensation, products liability and directors' and officers' insurance. We do not know, however, if these policies will provide us with adequate levels of coverage. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our cash position and results of operations.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarters are located in Exeter, New Hampshire, where we conduct our principal executive, manufacturing, research and development, sales and marketing, and administrative activities. We lease 95,320 square feet of office, manufacturing, research and development and warehouse space under a lease agreement that expires on January 28, 2025, with a renewal option for two additional five-year terms.

Below is a summary of our material facilities. We intend to lease additional space as we add employees, and we believe that suitable additional or substitute space will be available as needed to accommodate any such expansion of our operations.

Location	Owned or Leased	Lease Terms	Occupancy
Exeter, NH	Leased	Expires January 28, 2025, with renewal option for two additional five-year term	Manufacturing and warehouse
Mesquite, TX	Leased	Expires March 31, 2027, with renewal option for additional five-year term	Manufacturing and warehouse
Loanhead, UK	Leased	Expires February 15, 2027	Office and warehouse
Fort Washington, PA	Leased	Expires July 31, 2025, with renewal option for additional five-year term	Office
Tulsa, OK	Leased	Expires on July 31, 2026	Medical space

Item 3. Legal Proceedings.

From time to time we may become involved in various legal proceedings, including those that may arise in the ordinary course of business. There is no current litigation pending that could have, individually, or in the aggregate, a material adverse effect on our results of operations or financial condition.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock has been listed on the NYSE under the symbol "VAPO" since November 14, 2018. Prior to that date, there was no established public trading market for our common stock.

Holders

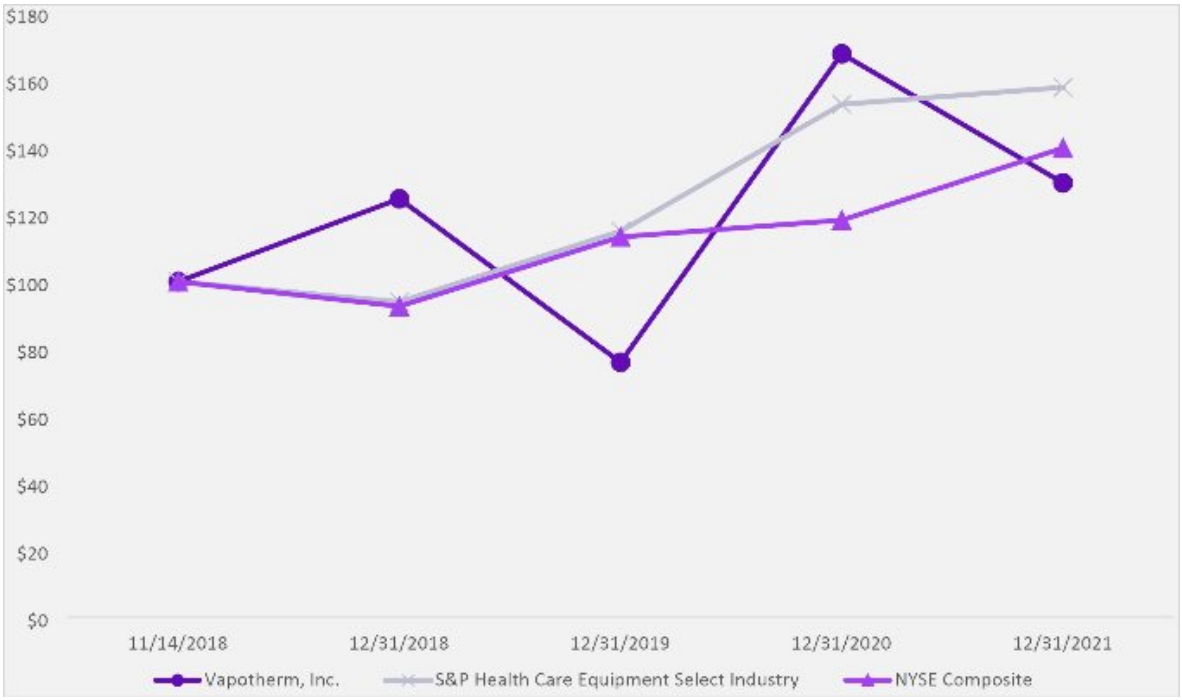
As of February 18, 2022, there were 136 holders of record of our common stock. The actual number of holders of our common stock is greater than this number of record holders and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers or held by other nominees.

Dividends

We have never declared or paid any cash dividends on our common stock and do not intend to do so in the foreseeable future. We currently intend to retain all available funds and any future earnings to finance the growth and development of our business. In addition, our Loan Agreement contains and the terms of any future credit agreements we enter into may contain, terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock.

Stock Performance Graph

The stock performance graph below compares the cumulative shareholder return (assuming reinvestment of dividends, where applicable) of $100 invested in each of: (i) our common stock; (ii) the NYSE Composite Index; and (iii) the S&P Health Care Equipment Select Industry Index for the period from November 14, 2018, the date of our initial public offering, to December 31, 2021. The stock price performance shown in the graph is not intended to forecast or be indicative of possible future performance of our common stock.



The comparisons in the graph above are not intended to forecast or be indicative of possible future performance of our common stock.

Issuer Purchases of Equity Securities

None.

Recent Sales of Unregistered Securities

None.

Use of Proceeds

None.

Item 6. Reserved.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our financial statements and the related notes to those statements included elsewhere in this Annual Report on Form 10-K. The discussion includes our financial results for the year ended December 31, 2021 compared to the year ended December 21, 2020. A discussion of the financial results for the year ended December 31, 2020 compared to the year ended December 31,2019 is included in Part II., "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on February 24, 2021, and is incorporated by reference into this Form 10-K. Some of the numbers included herein have been rounded for the convenience of presentation.

In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under Part I., "Item 1A. Risk Factors" and elsewhere in this Annual Report on Form 10-K.

Overview

Vapotherm is a global medical technology company focused on the care of patients of all ages suffering from the respiratory distress often associated with complex lung diseases such as COPD, CHF, pneumonia, asthma and COVID-19. Our strategy is to become the world's preeminent complex lung disease patient management company by combining digital, clinical and device solutions to create a healthcare ecosystem focused on improving the lives of complex lung disease patients while reducing the cost of their care. Our device solutions are focused on High Velocity Therapy, which delivers non-invasive ventilatory support to patients by providing heated, humidified, oxygenated air at high velocities through a small-bore nasal interface, and on closed loop control systems such as our Oxygen Assist Module, designed to automatically maintain SPO2 levels within a specified range for a defined period of time. Our digital solutions are focused on at home patient monitoring, using proprietary algorithms to predict impending respiratory episodes before they occur and coordinate timely intervention, obviating the need for costly hospital admissions and minimizing patient distress. Our clinical solutions include affiliations with leading pulmonologists and other clinicians, offering both in person and virtual care, as well as our own call center staffed by experienced nurses. While these device, digital and clinical solutions function independently, we believe leveraging the three together can create a unique healthcare ecosystem, focused on delivering high quality, efficient respiratory care.

High Velocity Therapy is an advanced form of high flow therapy that is differentiated due to its ability to deliver breathing gases, including oxygen, at a high velocity, for the treatment of spontaneously breathing patients with either Type 1 hypoxic respiratory distress, like that experienced by patients with pneumonia or COVID-19, or Type 2 hypercapnic respiratory distress, like that experienced by patients with COPD. Our Precision Flow systems, which use High Velocity Therapy technology, are clinically validated alternatives to, and address many limitations of, the current standard of care for the treatment of respiratory distress in a hospital setting. Our next generation High Velocity Therapy system, known as HVT 2.0, received 510k clearance from the FDA in 2021 and is currently in limited market release. The HVT 2.0 platform is approved for therapy in multiple settings of care, including the home. As of December 31, 2021, more than 3.3 million patients have been treated with our Precision Flow systems, and we have a global installed base of over 35,200 units, an increase of 22.9% compared to December 31, 2020, and an increase of 112.0 % compared to December 31, 2019.

Our business was significantly transformed during 2020 due to increased demand for our High Velocity Therapy technology for treatment of COVID-19 patients, as evidenced by year over year revenue growth of 161.4% from 2019 to 2020, and a 53.5% compounded annual revenue growth rate from 2019 to 2021. The COVID-19 pandemic contributed to this transformation in at least two primary ways: first, it resulted in increased awareness of the unique efficacy of our High Velocity Therapy for the treatment of COVID-19 patients, and generally, resulting in high global demand for our technology and the concomitant rapid growth of our installed base referred to above. Today, our brand is a recognized and respected name in an ever-increasing number of hospitals around the world. Second, many respiratory distress patients who require ventilatory support are initially treated in a hospital's ED with the goal of stabilizing these patients with a non-invasive ventilation therapy so their underlying condition can be treated. Our focus on hospital emergency departments as an effective entry point for our products resulted in our systems being in the right place at the right time when the COVID-19 pandemic hit. This exposed a significant number of new physicians to the efficacy of our High Velocity Therapy technology, especially as they were able to see patients moved out of the emergency room and into lower acuity settings in the hospital after receiving our High Velocity Therapy. We expect that increased awareness among physicians of the efficacy of our High Velocity Therapy to treat respiratory distress will result in expanded use of our products to treat all forms of Type 1 and Type 2 respiratory distress in a variety of settings.

In certain countries outside the United States, we currently offer our Oxygen Assist Module, or OAM, which launched in the United Kingdom, select European markets, and Israel in late 2020. The Oxygen Assist Module can be used with most versions of our Precision Flow system as well as the HVT 2.0. The Oxygen Assist Module helps clinicians maintain a patient's pulse oxygen saturation, or SpO2, within a target SpO2 range over a greater period of time while requiring significantly fewer manual adjustments to the equipment. Maintenance of the prescribed oxygen saturation range may reduce the health risks associated with dosing too much, or too little, oxygen, particularly in neonates. In neonates, these risks include visual or developmental impairment or death.

We sell our Precision Flow systems to hospitals through a direct sales organization in the United States, the United Kingdom and Germany and through distributors in other select countries outside of those countries. Our Oxygen Assist Module is sold through a direct sales organization in the United Kingdom and Germany and through distributors in Europe and the Middle East. We are in the process of seeking FDA approval to market the Oxygen Assist Module in the United States. In addition, we employ field-based clinical educators who focus on medical education and training in the effective use of our products and help facilitate increased adoption and utilization. We focus on physicians, respiratory therapists and nurses who work in acute hospital settings, including the ED and adult, pediatric and neonatal ICUs. Our relationship with these clinicians is particularly important, as it enables our products to follow patients through the care continuum. As of December 31, 2021, we have sold our Precision Flow systems to over 2,200 hospitals across the United States, and in over 40 countries outside of the United States.

Presently, our revenues are derived principally from sales of Precision Flow systems and sales of the single-use disposable vapor transfer cartridges these systems require. We also derive revenue from ancillary products and services related to our Precision Flow systems. Due to demand for our High Velocity Therapy technology during the COVID-19 pandemic, in 2020 we generated revenue primarily from sales of our Precision Flow systems. However, historically we have generated revenue primarily from sales of the disposable products utilized with our Precision Flow systems, and in the future, we believe we will generate revenue primarily from the sales of disposable products utilized with our systems. Our revenue grew from $48.1 million for the year ended December 31, 2019 to $113.3 million for the year ended December 31, 2021. Revenue from single-use disposables represented approximately 45.1% and 58.8% of our total revenue for the years ended December 31, 2020 and December 31, 2021, respectively, and increased 17.5% on a year over year basis. During this time, our international revenue also grew, representing 21.1% of our total revenue in 2020 and 25.7% of our total revenue in 2021. For the years ended December 31, 2019, 2020 and 2021, we incurred net losses of $51.1 million, $51.5 million, and $59.8 million, respectively.

We believe our anticipated growth will be driven by the following strengths: disruptive High Velocity Therapy technology supported by a compelling body of clinical and economic evidence; the expanded FDA indications we received for our next generation HVT 2.0 platform, enabling use in multiple settings of care; deep expertise in the area of closed loop control, machine learning based respiratory technology, the first example of which is our Oxygen Assist Module; new FDA clearances and/or approvals for our product pipeline, including the Oxygen Assist Module; a recurring revenue model with high visibility on our disposables utilization across a robust global installed base; an expanding digital and clinical footprint we expect will accelerate our strategy to become the world's preeminent complex lung disease patient management company; dedicated respiratory sales forces in the United States, the United Kingdom and Germany, which we expect to extend to other growing international markets; experienced international distributors; a comprehensive approach to market development with established clinical and digital marketing teams; a robust and growing intellectual property portfolio; and an experienced senior management team and board members with deep industry practice.

On November 13, 2020, we acquired HGE, a company which created a digital disease management solution for ongoing management of chronic respiratory disease. HGE developed a clinical services platform designed to help providers, payors and hospitals improve the quality of life of their COPD patients and reduce their cost of care by remotely monitoring their daily condition and responding early to changes that could signal an impending worsening of their COPD condition (known as an "exacerbation"). COPD exacerbations often result in emergency room visits and hospital admissions. HGE's platform was built based on clinical protocols and supported by 12 years of research focused on finding a better way to provide care for a geographically and socio-economically diverse COPD patient population. Unlike other disease management solutions, HGE effectively engages both patients and providers on a daily basis. A patient's symptoms are typically logged daily via a mobile application, quickly establishing a baseline. From there, HGE's intelligent platform enables clinicians to triage and respond to patients in need with same-day treatment plans that address current symptoms and seek to prevent impending exacerbations. In mid-2021, we re-branded HGE as Vapotherm Access and launched "Vapotherm Access – Post Care" to hospitals, a program dedicated to reducing 30-day readmissions of recently discharged COPD patients. We also launched "Vapotherm Access – 365" to hospitals, providers and payors, extending the 30 days of post care to full year patient monitoring. As part of this initiative, we established a small direct sales force focused exclusively on Vapotherm Access- Post Care and Vapotherm Access – 365. We believe our Vapotherm Access platform can be adapted to address other respiratory conditions and will help us achieve the goal of making our High Velocity Therapy products the standard of care in a variety of clinical settings.

In late 2021, we affiliated with a leading pulmonology practice in Tulsa, Oklahoma known as Pulmonary Care Innovations, PLLC d/b/a RespirCare. RespirCare provides in-person and virtual care to COPD and other respiratory distress patients in Oklahoma (and potentially other states with licensure reciprocity). This affiliation was structured as an acquisition of RespirCare's management company, PCI, and PCI's arrangements with RespirCare and its physician shareholder. Our affiliation with RespirCare is an important element of our strategy to become the world's preeminent complex lung disease patient management company. Operating within established legal safe harbors and applicable regulatory requirements, we may in the future enter into similar arrangements with other participants in the complex lung disease continuum of care.

We intend to continue to make significant investments in our sales and marketing organization by increasing the number of U.S. sales representatives, expanding the number of clinical educators internationally along with our international marketing programs and expanding worldwide direct to clinician digital marketing efforts to help facilitate further adoption among existing hospital accounts as well as broaden awareness of our products to new hospitals. We also expect to continue to make investments in research and development, regulatory affairs, and clinical studies to develop future generations of our High Velocity Therapy products, support regulatory submissions, and demonstrate the clinical efficacy of our new products. In addition, we have continued to make improvements and adjustments to our production capacity in response to high demand for our products and labor shortages, including recently engaging a third-party manufacturer to manufacture and assemble certain of our products at its facility in Tijuana, Mexico and hiring temporary production workers. While these actions put pressure on our gross margins during 2021, we anticipate long-term benefits of these actions. Because of these and other factors, we expect to continue to incur net losses for the next several years and we expect to require additional funding, which may include future equity and debt financings.

Components of Our Results of Operations

Net Revenue

Our net revenue consists primarily of the sale of products, leases and services.

Product Revenue

We primarily derive our revenue from the sale of our products to hospitals in the United States and United Kingdom and through distributors in select countries outside of the United States. Product sales consist of the following:

- *Capital Revenue* - Our capital revenue is derived from the sale of our capital equipment, which consists of the Precision Flow High Velocity technology, Precision Flow Plus, Precision Flow Classic, Precision Flow Heliox, Q50 compressor, HVT 2.0 and the Oxygen Assist Module. Capital equipment sales include a one-year warranty. We offer different options to our hospital customers for acquiring Precision Flow capital units, ranging from the purchase of the Precision Flow capital units with payment in full at the time of purchase, to financed purchases of the Precision Flow capital units, to bundled discounts involving the placement of Precision Flow capital units for use by the customer at no upfront charge in connection with the customer's ongoing purchase of disposable products.

- *Disposables Revenue* - Our disposables revenue is derived from the sale of single-use disposables, nasal interfaces, or cannulas, and adaptors used in conjunction with the Precision Flow capital units.

Lease Revenue

We enter into agreements to lease our capital equipment. We assess and classify these transactions as sales-type or operating leases based on whether the lease transfers ownership of the equipment to the lessee. Equipment included in arrangements which provide for the transfer of title at, or shortly after, the end of the lease term is accounted for as a sales-type lease. We record the present value of future lease payments as a component of prepaid expenses and other current assets in our consolidated balance sheets and recognize the present value of the lease payments due over the lease term as lease revenue at the inception of the lease. Equipment included in arrangements that do not transfer title are accounted for as operating leases and we recognize lease revenue on a straight-line basis over the lease term.

Service Revenue

This revenue consists of service, component part and freight revenue offset by rebates and fees payable to GPOs, IDNs and distributor partners. Service revenue consists of fees associated with routine service of capital units and the sale of extended service contracts and preventative maintenance plans. In addition, we sell small quantities of component parts in the

United States, United Kingdom, and to third-party international service centers who service Precision Flow capital units outside of the United States and United Kingdom. Freight revenue is based upon actual freight costs plus a percentage markup of these costs associated with the shipment of products domestically, and to a lesser extent, internationally.

Our revenue growth during 2021 and 2020 in each case compared to 2019 was driven by increasing revenue from product sales due to our increased installed base of Precision Flow systems and related disposables sales. Our revenue has fluctuated, and we expect it to continue to fluctuate, from quarter to quarter due to a variety of factors including seasonality. Prior to COVID-19, we historically experienced seasonality in our first quarter due to the impact of the flu season in the Northern Hemisphere and in our fourth quarter, which coincides with our customers' fiscal year-end and often drives higher purchases of capital equipment as previously approved but unspent capital budgets typically expire at year-end. We expect COVID-19 to be a permanent part of the respiratory landscape similar to the flu or RSV. While COVID-19 surges are unpredictable, we believe that these surges will be aligned to changes in seasons when individuals spend more time inside. Thus, we believe that COVID-19 will most likely impact the first and fourth quarters of the year. We also expect our future revenue to be dependent upon other factors, such as continued market awareness and acceptance of our High Velocity Therapy technology, our Oxygen Assist Module, and our Vapotherm Access applications and offerings, favorable clinical data and outcomes using our products and services, introduction of new products, and continued international expansion. In addition, we have expanded our sales and marketing infrastructure to help us drive and support revenue growth and we intend to continue this expansion.

Cost of Revenue and Gross Margin

Cost of revenue consists primarily of costs incurred in the production process, including costs of component materials, assembly labor and overhead, warranty, provisions for slow-moving and obsolete inventory, facilities-related expenses, depreciation and freight costs for items sold. Within the overhead costs, we include personnel-related expenses, including salaries, bonuses, benefits and stock-based compensation for our procurement, quality control and operations personnel. We provide a one-year warranty on capital equipment, and we establish a reserve for warranty repairs based on historical warranty repair costs incurred. Provisions for warranty obligations, which are included in cost of revenue, are provided for at the time of shipment. Cost of revenue in absolute dollars will increase as our sales volume increases.

We calculate gross margin as gross profit divided by revenue. Our gross margin has been, and we expect it will continue to be, affected by a variety of factors, including manufacturing costs, the average selling prices of our products, the implementation of disposable cost-reduction initiatives, sales volume, inventory obsolescence costs, and seasonality. Sales mix also impacts our gross margins as our average selling prices in the United States are typically higher than for our international sales given our distribution model. In addition, sales of our single-use disposables carry a higher margin than that of our capital equipment sales. Our gross margin may increase over the long-term to the extent our production volumes increase, we launch new products and we continue to experience cost savings derived from supply chain and manufacturing efficiencies.

Operating Expenses

Research and Development

Research and development expenses consist primarily of product development, engineering, regulatory expenses, testing, laboratory supplies, consulting services and other costs associated with future generations of products using our High Velocity Therapy technology. These expenses include personnel-related expenses, including salaries, bonuses, benefits and stock-based compensation for employees in our research and development, regulatory, quality assurance and innovation functions. We expect research and development expenses to increase in the future as we develop future generations of products using our High Velocity Therapy technology and companion products. We expect research and development expenses as a percentage of revenue to vary over time depending on the level and timing of new product development initiatives.

Sales and Marketing

Our sales and marketing expenses consist primarily of personnel-related expenses, including salaries, commissions and bonuses, travel expenses, benefits and stock-based compensation for employees in our sales and marketing, customer service and medical education functions. Other sales and marketing expenses include consulting services, education, training, tradeshows, digital marketing, medical education and clinical studies. We expect sales and marketing expenses to continue to increase in absolute dollars as we continue to expand our sales and marketing organization to both drive and support our future growth initiatives. Over time, we expect sales and marketing expenses to continue to decrease as a percentage of revenue primarily as, and to the extent, our revenue grows.

General and Administrative

General and administrative expenses consist primarily of personnel-related expenses, including salaries, bonuses, benefits, and stock-based compensation, for employees in our finance, administration, human resources, information technology, and legal functions. Other general and administrative expenses include professional services fees, audit fees, travel expenses, insurance costs, change in estimated fair value of contingent consideration and general corporate expenses including facilities-related expenses. We expect our general and administrative expenses will increase in absolute dollars as we expand our headcount to support our anticipated future growth and operations as a public company. Over time, we expect general and administrative expenses to decrease as a percentage of revenue primarily as, and to the extent, our revenue grows.

Other Expense, Net

Other expense, net consists primarily of interest expense related to our credit facilities offset by interest income driven by the interest accruing on cash and cash equivalents. Other expense, net also includes the gain on litigation settlement, loss on the extinguishment of debt, and foreign currency gains or losses arising from transactions denominated in foreign currencies.

Benefit for Income Taxes

The benefit for income taxes represents a benefit for net deferred income tax assets deemed more likely than not to be realized by our United Kingdom subsidiary. We have not recorded any federal or state income tax benefits related to domestic operating losses due to uncertainty about future taxable income.

Results of Operations

	Year Ended December 31,	
	2021	**2020**
	(in thousands)	
Net revenue	$ 113,292	$ 125,733
Cost of revenue	60,104	62,687
Gross profit	53,188	63,046
Operating expenses		
Research and development	18,410	16,956
Sales and marketing	60,140	65,065
General and administrative	31,375	24,039
Intangible asset impairment	323	-
Loss on disposal of property and equipment	105	-
Total operating expenses	110,353	106,060
Loss from operations	(57,165)	(43,014)
Other expense, net	(2,711)	(8,488)
Net loss before income taxes	(59,876)	(51,502)
Benefit from income taxes	(76)	-
Net loss	$ (59,800)	$ (51,502)

Years Ended December 31, 2021 and 2020

Net Revenue

	Year Ended December 31,					
	2021		2020		Change	
	(in thousands, except percentages)					
	Amount	% of Revenue	Amount	% of Revenue	$	%
Product Revenue						
Capital Equipment	$ 33,666	29.7%	$ 58,183	46.3%	$ (24,517)	(42.1%)
Disposables	66,631	58.8%	56,711	45.1%	9,920	17.5%
Subtotal Product Revenue	100,297	88.5%	114,894	91.4%	(14,597)	(12.7%)
Lease Revenue						
Capital Equipment	4,321	3.8%	5,770	4.6%	(1,449)	(25.1%)
Other	2,109	1.9%	2,011	1.6%	98	4.9%
Service and Other Revenue	6,565	5.8%	3,058	2.4%	3,507	114.7%
Net Revenue	$ 113,292	100.0%	$ 125,733	100.0%	$ (12,441)	(9.9%)

Net revenue decreased $12.4 million, or 9.9%, to $113.3 million for the year ended December 31, 2021 compared to $125.7 million for the year ended December 31, 2020. The decrease in net revenue was primarily attributable to a $24.5 million decrease in capital equipment revenue and a $1.4 million decrease in capital equipment lease revenue, partially offset by a $9.9 million increase in disposables revenue and a $3.5 million increase in service and other revenue. Capital equipment revenue and capital equipment lease revenue decreased 42.1% and 25.1%, respectively, during the year ended December 31, 2021 primarily due to decreased sales of our Precision Flow units as a result of decreased COVID-19 related demand. Disposables revenue increased 17.5% during the year December 31, 2021 primarily driven by an increase in the worldwide installed base of Precision Flow units and higher average selling prices. The increase in service and other revenue during the year ended December 31, 2021 is primarily the result of Vapotherm Access revenue as a result of the HGE acquisition in the fourth quarter of 2020.

Revenue information by geography is summarized as follows:

	Year Ended December 31,					
	2021		2020		Change	
	(in thousands, except percentages)					
	Amount	% of Revenue	Amount	% of Revenue	$	%
United States	$ 84,147	74.3%	$ 99,161	78.9%	$ (15,014)	(15.1%)
International	29,145	25.7%	26,572	21.1%	2,573	9.7%
Total net revenue	$ 113,292	100.0%	$ 125,733	100.0%	$ (12,441)	(9.9%)

Net revenue generated in the United States decreased $15.0 million, or 15.1%, to $84.1 million for the year ended December 31, 2021, compared to $99.2 million for the year ended December 31, 2020. Net revenue generated in our International markets increased $2.6 million, or 9.7%, to $29.1 million for the year ended December 31, 2021, compared to $26.6 million for the year ended December 31, 2020. The decrease in United States net revenue was primarily due to a decrease in the number of Precision Flow units sold, partially offset by an increase in single-use disposable sales due to a higher installed base of Precision Flow units. The increase in International net revenue was primarily due to an increase in single-use disposable sales due to a higher installed base of Precision Flow units, partially offset by a decrease in the number of Precision Flow units.

Cost of Revenue and Gross Margin

Cost of revenue decreased $2.6 million, or 4.1%, to $60.1 million during the year ended December 31, 2021 compared to $62.7 million in the year ended December 31, 2020. The decrease was primarily due to the decrease in sales volumes of our Precision Flow units, partially offset by an increase in sales of disposables due to a higher worldwide installed base of Precision Flow units and higher production and labor costs.

Gross margin decreased to 46.9% during the year ended December 31, 2021 compared to 50.1% during the year ended December 31, 2020. Gross profit was negatively impacted by temporary production costs associated with higher labor rates for temporary laborers, including travel costs, expedited freight charges, establishing disposables production capacity in Mexico via a third-party manufacturer, and changes in overhead absorption due to lower production volumes in 2021 compared to 2020.

Research and Development Expenses

Research and development expenses increased $1.5 million, or 8.6%, to $18.4 million during the year ended December 31, 2021 compared to $17.0 million in during the year ended December 31, 2020. As a percentage of revenue, research and development expenses increased to 16.3% in 2021 compared to 13.5% in 2020. The increase in research and development expenses was due to increased product development and patent-related costs associated with the development of our future generation High Velocity systems and increased employee-related expenses and stock-based compensation, partially offset by a decrease in prototype costs.

Sales and Marketing Expenses

Sales and marketing expenses decreased $4.9 million, or 7.6%, to $60.1 million during the year ended December 31, 2021 compared to $65.1 million during the year ended December 31, 2020. As a percentage of revenue, sales and marketing expenses increased to 53.1% in 2021 compared to 51.7% in 2020. The decrease in sales and marketing expenses was primarily due to decreased sales commissions, partially offset by higher employee-related expenses, increased stock-based compensation, travel expenses and marketing-related costs related to materials, sponsorships and research.

General and Administrative Expenses

General and administrative expenses increased $7.3 million, or 30.5%, to $31.4 million during the year ended December 31, 2021 compared to $24.0 million during the year ended December 31, 2020. As a percentage of revenue, general and administrative expenses increased to 27.7% in 2021 compared to 19.1% in 2020. The increase in general and administrative expenses was primarily due to increases in employee-related expenses and stock-based compensation, and increases in legal, insurance, rent, audit and compliance related costs, recruiting, travel and annual event costs, partially offset by a decrease in the estimated fair value of contingent consideration.

Intangible Asset Impairment

We recorded an intangible asset impairment charge of $0.3 million for the year ended December 31, 2021 related to trade names and trademarks no longer in use. There were no impairment charges recorded for the year ended December 31, 2020.

Loss on Disposal of Property and Equipment

We recorded a loss on disposal of certain property and equipment totaling $0.1 million for the year ended December 31, 2021. There were no such items recorded for the year ended December 31, 2020.

Other Expense, Net

Other expense, net decreased by $5.8 million, or 68.1%, to $2.7 million during the year ended December 31, 2021 compared to $8.5 million during the year ended December 31, 2020. The decrease in other expense, net was primarily due a $4.2 million loss on extinguishment of debt during 2020, and to a lesser extent, a decrease in interest expense due to lower average interest rates on outstanding borrowings in each case in 2021 compared to 2020.

Benefit for Income Taxes

The benefit for income taxes for the year ended December 31, 2021 totaled $0.1 million and related to a benefit for net deferred income tax assets deemed more likely than not to be realized by our United Kingdom subsidiary. There was no such benefit recorded in 2020. We have not recorded any federal or state income tax benefits related to domestic operating losses due to uncertainty about future taxable income.

Seasonality

Although we did not experience seasonality during 2020 or 2021 due to demand for our High Velocity Therapy technology during the COVID-19 pandemic, prior to COVID-19 we experienced seasonality in our first and fourth quarters. We have experienced higher sales in the fourth quarter as a result of increased sales from hospitals nearing their fiscal year-end that have not fully utilized the funds allocated to purchases of our Precision Flow systems. In the first quarter of each year we have experienced higher sales in direct correlation with the number of patients presenting with respiratory distress due to the severity of the flu season, especially in the Northern Hemisphere. We expect COVID-19 to be a permanent part of the respiratory landscape similar to the flu or RSV. While COVID-19 surges are unpredictable, we believe that these surges will be aligned to changes in seasons when individuals spend more time inside. Thus, we believe that it will most likely impact the first and fourth quarters of the year.

Liquidity and Capital Resources

As of December 31, 2021, we had cash, cash equivalents and restricted cash of $57.3 million, working capital of $66.6 million and an accumulated deficit of $376.7 million. Our primary sources of capital to date have been from sales of our equity securities, sales of our Precision Flow systems and their associated disposables and amounts borrowed under credit facilities. Since inception, we have raised a total of $371.9 million in net proceeds from sales of our equity securities.

We believe that our existing cash resources, including the recent funding under our new credit facility, will be sufficient to meet our capital requirements and fund our operations for at least the next 12 months. If these sources are insufficient to satisfy our liquidity requirements, we may seek to sell additional equity securities or enter into new or restructure existing debt financing arrangements. If we raise additional funds by issuing equity securities, our stockholders would experience dilution. Additional debt financing, if available, may involve additional covenants restricting our operations or our ability to incur additional debt. Any additional debt or equity financing that we raise may contain terms that are not favorable to us or our stockholders. Additional financing may not be available at all or may be available only in amounts or on terms unacceptable to us. If we are unable to obtain additional financing, we may be required to delay the development, commercialization and marketing of our products and services.

Cash Flows

The following table presents a summary of our cash flows for the periods indicated:

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (55,371)	$ (39,468)
Investing activities	(7,199)	(18,169)
Financing activities	4,370	99,676
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(12)	(10)
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ (58,212)	$ 42,029

Operating Activities

The net cash used in operating activities was $55.4 million in 2021 and consisted primarily of a net loss of $59.8 million and an increase of $11.5 million in net operating assets, partially offset by $15.9 million in non-cash charges. Non-cash charges consisted primarily of stock-based compensation expense, depreciation and amortization and non-cash lease expense.

The net cash used in operating activities was $39.5 million in 2020 and consisted primarily of a net loss of $51.5 million and an increase of $4.5 million in net operating assets, partially offset by $16.5 million in non-cash charges. Non-cash charges consisted primarily of stock-based compensation expense, depreciation and amortization, loss on extinguishment of debt and non-cash lease expense.

Investing Activities

Net cash used in investing activities for 2021 and 2020 consisted of purchases of property and equipment of $5.9 million and $9.8 million, respectively. Net cash used in investing activities in 2021 also included $1.3 million to acquire PCI. Net cash used in investing activities in 2020 also included $8.4 million to acquire HGE.

Financing Activities

Net cash provided by financing activities was $4.4 million in 2021 and consisted of proceeds from net borrowings under our credit facility of $1.7 million and proceeds from common stock issuances from stock option exercises and purchases under our employee stock purchase plan of $1.5 million and $1.1 million, respectively.

Net cash provided by financing activities was $99.7 million in 2020 and consisted of proceeds from the issuance of common stock in connection with public and at-the-market offerings of $94.2 million and $9.9 million, respectively and proceeds from common stock issuances in connection with purchases under our employee stock purchase plan and stock option exercises of $0.8 million and $0.6 million, respectively, partially offset by payments of debt extinguishment costs of $3.8 million, net repayments of $1.1 million under our credit facilities, debt issuance costs of $0.5 million and common stock offering costs of $0.5 million.

Credit Facilities

On October 21, 2020, we entered into a Loan and Security Agreement (the "CIBC Loan Agreement") with Canadian Imperial Bank of Commerce Innovation Banking ("CIBC") which provided for a revolving loan facility of $12.0 million (the "CIBC Revolving Facility") and a term loan facility of $40.0 million (the "CIBC Term Facility" and, together with the Revolving Facility, the "CIBC Facilities"). The proceeds of the CIBC Facilities were used to repay our prior revolving loan facility and term loan facility. As of December 31, 2021, we had $6.6 million and $40.0 million of outstanding borrowings under our CIBC Revolving Facility and CIBC Term Facility, respectively.

The CIBC Revolving Facility was scheduled to mature on October 21, 2022 and could have been renewed on an annual basis thereafter by mutual agreement of us and CIBC. The CIBC Revolving Facility bore interest at a floating rate per annum equal to the Wall Street Journal ("WSJ") Prime Rate plus 1.0% and was subject to a floor of 3.25%. At December 31, 2021, the interest rate was 4.25%. The outstanding balance under the CIBC Revolving Facility was $6.6 million at December 31, 2021 and there were letters of credit of $0.8 million outstanding at December 31, 2021. Availability under the CIBC Revolving Facility was determined based on eligible receivables reduced by letters of credit outstanding. At December 31, 2021, there were no additional borrowings available under the CIBC Revolving Facility.

The CIBC Term Facility was scheduled to mature on October 21, 2025. Advances under the CIBC Term Facility bore interest at a floating rate per annum equal to the WSJ Prime Rate plus 2.5% and were subject to a floor of 3.25%. At December 31, 2021, the interest rate was 5.75%. The outstanding balance was $40.0 million at December 31, 2021. The CIBC Loan Agreement provided for interest-only payments on the CIBC Term Facility for the first 36 months through October 21, 2023. Thereafter, amortization payments on the CIBC Term Facility were to be payable monthly in 24 equal installments. The CIBC Term Facility could not be prepaid prior to October 21, 2021 without prepaying all of the interest that otherwise would have been payable on the CIBC Term Facility during the period commencing on October 21, 2020 and ending on October 21, 2021, plus a prepayment charge of 2.0%. Thereafter, the CIBC Term Facility could be prepaid in full, subject to a prepayment charge of (i) 2.0%, if such prepayment occurred after October 21, 2021 but on or prior to October 21, 2022, and (ii) 1.0%, if such prepayment occurred after October 21, 2022 but on or prior to October 21, 2023. The CIBC Facilities were secured by a lien on substantially all of our assets, including intellectual property.

The CIBC Loan Agreement contained customary covenants and representations, including, without limitation, a minimum revenue covenant equal to 80% of each year's annual operating plan (tested on a trailing twelve month basis at the end of each fiscal quarter) and other financial covenants, reporting obligations, and limitations on dispositions, changes in business or ownership, mergers or acquisitions, indebtedness, encumbrances, distributions and investments, transactions with affiliates and capital expenditures.

The events of default under the CIBC Loan Agreement included, without limitation, and subject to customary grace periods, (1) our failure to make any payments of principal or interest under the CIBC Loan Agreement or other loan documents, (2) our breach or default in the performance of any covenant under the CIBC Loan Agreement, (3) the occurrence of a material adverse effect or an event that is reasonably likely to result in a material adverse effect, (4) the existence of an attachment or levy on a material portion of our or our subsidiaries' funds, (5) our insolvency or bankruptcy, or (6) the occurrence of certain material defaults with respect to any other of our indebtedness in excess of $500,000. If an event of default occurred, CIBC was entitled to take enforcement action, including acceleration of amounts due under the CIBC Loan Agreement. The CIBC Loan Agreement also contained other customary provisions, such as expense reimbursement and confidentiality. CIBC had indemnification rights and the right to assign the CIBC Facilities, subject to customary restrictions.

As of December 31, 2021, we were in compliance with all covenants under the CIBC Loan Agreement.

On October 21, 2020, we used $40 million of the CIBC Term Facility, approximately $4.9 million of the CIBC Revolving Facility, and approximately $6.3 million of cash on hand to pay off all obligations owing under the prior revolving loan facility and term loan facility. As a result of such termination, we recorded a loss on extinguishment of debt of $4.2 million, which included the prepayment penalty, exit fees, write-off of the remaining unamortized deferred financing costs, and legal fees, during the fourth quarter of 2020.

On February 18, 2022, we entered into the Loan Agreement with SLR which provides for the Term Loan A Facility of $100.0 million and the Term Loan B Facility of $25.0 million. The Term Loan A Facility was funded to us on the Effective Date. The Term Loan B Facility will be available to us following the Effective Date upon achievement of a certain minimum revenue level as more fully described in the Loan Agreement. The proceeds of Term Loan A Facility were used to repay all indebtedness under the CIBC Loan Agreement.

The Facilities will mature on February 1, 2027. Advances under the Facilities bear interest at a floating rate per annum equal to (a) the greater of (i) 0.10% and (ii) the LIBOR Rate, plus (b) 8.30%. The Loan Agreement provides for interest-only payments for the first forty-eight months following the Effective Date. Thereafter, amortization payments on the Facilities will be payable monthly in twenty-four equal installments; provided that we shall have the option to extend the interest-only period for an additional twelve months upon achievement of a certain minimum revenue level as more fully described in the Loan Agreement. The Facilities are secured by a lien on substantially all of our assets, including intellectual property.

The Loan Agreement contains customary covenants and representations, including, without limitation, a minimum revenue covenant equal to 75% of each month's forecasted net product revenue (tested on a trailing six month basis at the end of each fiscal month, commencing with the six month period ending on July 31, 2022) and other financial covenants, reporting obligations, and limitations on dispositions, changes in business or ownership, mergers or acquisitions, indebtedness, encumbrances, distributions and investments, transactions with affiliates and capital expenditures.

The events of default under the Loan Agreement include, without limitation, and subject to customary grace periods, (1) our failure to make any payments of principal or interest under the Loan Agreement or other loan documents, (2) our breach or default in the performance of any covenant under the Loan Agreement, (3) the occurrence of a material adverse effect or an event that is reasonably likely to result in a material adverse effect, (4) the existence of an attachment or levy on a material portion of our funds or of our subsidiaries, (5) our insolvency or bankruptcy, or (6) the occurrence of certain material defaults with respect to any other of our indebtedness in excess of $500,000. If an event of default occurs, SLR is entitled to take enforcement action, including acceleration of amounts due under the Loan Agreement.

The Loan Agreement also contains other customary provisions, such as expense reimbursement and confidentiality. SLR has indemnification rights and the right to assign the Facilities, subject to customary restrictions.

On February 18, 2022, we utilized approximately $47.4 million of the Term Loan A Facility to pay off all obligations owing under to pay off all obligations owing under, and to terminate the CIBC Facilities.

At-the-Market Agreement

On December 20, 2019, we entered into an Open Market Sales Agreement (the "ATM Agreement") with Jefferies LLC ("Jefferies") under which we may offer and sell our common stock having aggregate sales proceeds of up to $50.0 million from time to time through Jefferies as our sales agent. We did not sell any shares of our common stock under the ATM Agreement during the year ended December 31, 2021. The ATM Agreement will remain in full force and effect until terminated by either party pursuant to the terms of the agreement or such date that the maximum offering amount has been sold in accordance with the terms of the agreement. As of December 31, 2021, there was approximately $39.8 million in remaining capacity under this program.

Contractual Obligations

In the normal course of business, we enter into contracts and commitments that obligate us to make payments in the future. Information regarding our obligations under contingent consideration, debt, lease and purchase arrangements are provided in the Notes 3, 10 and 11 to our consolidated financial statements included in this Annual Report on Form 10-K.

Critical Accounting Policies and Practices

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes included elsewhere in this Annual Report on Form 10-K. Management believes that such estimates have been based on reasonable and supportable assumptions and the resulting estimates are reasonable for use in the preparation of the financial statements. Actual results could differ from these estimates.

Critical accounting policies are defined as those that are reflective of significant judgements and uncertainties, the most important and pervasive accounting policies used and areas most sensitive to material changes from external factors. The critical accounting policies that we believe affect our more significant judgements and estimates used in the preparation of our consolidated financial statements presented in this Annual Report on Form 10-K are described in the Notes to our consolidated financial statements.

Critical accounting estimates that involve a significant level of uncertainty and have had or are reasonably likely to have a material impact on our financial condition or results of operations include the following:

Contingent Consideration

Management is responsible for determining the appropriate valuation model and estimated fair value of contingent consideration. To estimate the fair value, management considers a number of factors, including information provided by a third-party valuation advisor. Contingent consideration liabilities are reported at their estimated fair values based on probability-adjusted present values of the consideration expected to be paid, using significant inputs and estimates. Key assumptions used in these estimates include probability assessments with respect to the likelihood of achieving certain milestones, discount rates consistent with the level of risk of achievement, and volatility rates. The fair value of the contingent consideration liability is remeasured at each reporting period, with changes in the fair value included in current operations. The remeasured liability amount could be significantly different from the amount estimated at the acquisition date, resulting in material charges or credits in future reporting periods. Contingent consideration totaled $9.1 million and $13.2 million at December 31, 2021 and 2020, respectively. The change in fair value of contingent consideration, recorded within general and administrative expenses in the consolidated statement of comprehensive loss, for the year ended December 31, 2021 totaled $1.8 million and was a reduction in fair value and, therefore, a reduction in operating expenses.

Goodwill Impairment

Goodwill represents the difference between the purchase price and the fair value of the identifiable tangible and intangible net assets when accounted for using the purchase method of accounting in a business combination. Goodwill is not amortized but reviewed for impairment. Goodwill is reviewed annually, as of October 1, and whenever events or changes in circumstances indicate that the carrying value of the goodwill may not be recoverable. We test goodwill for impairment at the reporting unit level. A reporting unit is a segment or one level below an operating segment (referred to as a component) to which goodwill is assigned when initially recorded. Under U.S. GAAP, we have the option to first assess qualitative factors to determine whether the existence of current events or circumstances would lead to a determination that it is more likely than not that the fair value of one of our reporting units is greater than its carrying value. If we determine it is more likely than not that the fair value of a reporting unit is greater than its carrying value, no further testing is necessary. However, if we conclude otherwise, then we are required to perform a quantitative impairment test by calculating the fair value of the reporting unit and comparing the fair value with the carrying value of the reporting unit. If the fair value of the reporting unit is less than its carrying value, a non-cash impairment charge is recorded in an amount equal to that difference with the loss not to exceed the total amount of goodwill allocated to the reporting unit. We have the option to bypass the qualitative assessment for any reporting unit and proceed directly to performing the quantitative goodwill impairment test. For reporting units where we perform the quantitative test, we determine the fair value using a combination of the income approach and the market approach. For a company such as ours, the income and market approaches will generally provide the most reliable indications of fair value because the value of such companies is dependent on their ability to generate earnings. In the income approach, we utilize a discounted cash flow analysis, which involves estimating the expected after-tax cash flows that will be generated by each reporting unit and then discounting those cash flows to present value, reflecting the relevant risks associated with each reporting unit and the time value of money. This approach requires the use of significant estimates and assumptions, including forecasted revenue growth rates, forecasted earnings before interest, taxes, depreciation and amortization (“EBITDA”) margins, and discount rates. Our forecasts are based on historical experience, current backlog, expected market demand, and other industry information. In the market approach, we utilize the guideline company method, which involves calculating revenue and EBITDA multiples based on operating data from guideline publicly traded companies. Multiples derived from guideline companies provide an indication of how much a knowledgeable investor in the marketplace would be willing to pay

for a company. These multiples are evaluated and adjusted based on specific characteristics of the reporting units relative to the selected guideline companies and applied to the reporting units' operating data to arrive at an indication of value. Changes in key assumptions utilized in our assessment could significantly impact our fair value calculations which could result in goodwill impairments in future periods.

We compared the fair value of our reporting units to their carrying values as of October 1, 2021 and 2020. Based on our assessment, there was no impairment of goodwill during 2021 or 2020.

Recent Accounting Pronouncements

A discussion of recent accounting pronouncements is included in Note 2 to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Risk

Our exposure to interest rate risk arises primarily from variable interest rates applicable to borrowings under our CIBC Revolving Facility and our CIBC Term Facility and interest rates associated with our invested cash balances. Borrowings under our CIBC Revolving Facility bear interest at a floating rate per annum equal to the WSJ Prime Rate plus 1.0% and is subject to a floor of 3.25%. At December 31, 2021, the interest rate was 4.25%. Borrowings under our CIBC Term Facility bear interest at a floating rate per annum equal to the WSJ Prime Rate plus 2.5% and is subject to a floor of 3.25%. At December 31, 2021, the interest rate was 5.75%. As of December 31, 2021, borrowings under our CIBC Revolving Facility and CIBC Term Facility total $6.6 million and $40.0 million, respectively. Based on our outstanding borrowings and the WSJ Prime Rate, a 100 basis point increase in the annual interest rate on our outstanding borrowings would have a $0.5 million impact on our interest expense on an annual basis.

On December 31, 2021, we had cash invested in money market deposits of $35.6 million. We believe that a 10 basis point change in interest rates is reasonably possible in the near term. Certain of our cash and cash equivalents balances exceed FDIC insured limits. We place our cash and cash equivalents in what we believe to be credit-worthy financial institutions. Based on our current level of cash investments, an increase or decrease of 10 basis points in interest rates would have a less than $0.1 million impact to our interest income on an annual basis.

Foreign Currency Risk

For our non-U.S. subsidiaries that transact in a functional currency other than the U.S. dollar, assets and liabilities are translated at current rates of exchange as of the balance sheet date. Our principal exchange rate risk is between the U.S. dollar and the British pound sterling, and to a lesser extent, the euro. Adjustments resulting from the translation of the financial statements of their foreign operations into U.S. dollars are excluded from the determination of net loss and are recorded in accumulated other comprehensive income (loss), a separate component of stockholders' equity. Income and expense items are translated at the average foreign currency exchange rates for the period. As a result, our financial condition and operating results are affected by fluctuations in the value of the U.S. dollar as compared to the British pound sterling and to a lesser extent, the euro. Revenues denominated in currencies other than the U.S. dollar represented approximately 3.7% and 3.4% of consolidated net revenues for the years ended December 31, 2021 and 2020, respectively. Total assets denominated in the British pound sterling and euros represented approximately 1.6% and 0.8% of our total assets at December 31, 2021 and December 31, 2020, respectively. Given the immateriality of net revenues and assets denominated in currencies other than the U.S. dollar, a 10% fluctuation in exchange rates would have an immaterial impact to our consolidated net revenues and consolidated total assets. We do not use foreign exchange contracts or derivatives to hedge any foreign currency exposures.

Inflation Risk

Inflationary factors, such as increases in our cost of revenue and selling and operating expenses, may adversely affect our operating results. Although we do not believe that inflation has had a material impact on our financial position or results of operations to date, a high rate of inflation in the future may have an adverse effect on our ability to maintain and increase our gross margin and sales and marketing and operating expenses as a percentage of our revenue if the selling prices of our products do not increase as much as or more than these increased costs.

Item 8. Financial Statements and Supplementary Data.

The financial statements required to be filed pursuant to this Item 8 are appended to this report. An index of those financial statements is found in Item 15 of Part IV of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2021. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2021, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, our principal executive and principal financial officers, or persons performing similar functions, and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We continue to review our internal control over financial reporting and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business.

Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in "Internal Control — Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). In accordance with guidance issued by the Securities and Exchange Commission, companies are permitted to exclude acquisitions from their final assessment of internal control over financial reporting for the first fiscal year in which the acquisition occurred. Management's evaluation of internal control over financial reporting excluded the internal control activities of PCI and RespirCare, which we acquired and became affiliated with, respectively, on November 2, 2021, and which represents 1.4% of our total assets and 0.2% of our total net revenues for the year ended December 31, 2021.

Based on this assessment, our senior management has concluded that our internal control over financial reporting was effective as of December 31, 2021.

Grant Thornton LLP, our independent registered public accounting firm, has issued an attestation report on the effectiveness of the Company's internal control over financial reporting.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2021 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
Vapotherm, Inc.

Opinion on internal control over financial reporting

We have audited the internal control over financial reporting of Vapotherm, Inc.(a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2021, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated financial statements of the Company as of and for the year ended December 31, 2021, and our report dated February 24, 2022 expressed an unqualified opinion on those financial statements.

Basis for opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's Report on Internal Control over Financial Reporting." Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Our audit of, and opinion on, the Company's internal control over financial reporting does not include the internal control over financial reporting of PCI Management Group LLC ("PCI") and Pulmonary Care Innovation, PLLC ("RespirCare"), whose combined financial statements reflect total assets and revenues constituting 1.4% and 0.2%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2021. As indicated in Management's Report on Internal Control over Financial Reporting, PCI and RespirCare were acquired during 2021. Management's assertion on the effectiveness of the Company's internal control over financial reporting excluded internal control over financial reporting of PCI and RespirCare.

Definition and limitations of internal control over financial reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ GRANT THORNTON LLP

New York, New York
February 24, 2022

Item 9B. Other Information.

On February 18, 2022, the Company entered into the Loan Agreement with SLR. The Loan Agreement provides for the Term Loan A Facility of $100.0 million and the Term Loan B Facility of $25.0 million. The Term Loan A Facility was funded to the Company on the Effective Date. The Term Loan B Facility will be available to Company following the Effective Date upon achievement of a certain minimum revenue level as more fully described in the Loan Agreement. The proceeds of the Facilities were to repay the Company's existing revolving loan facility and term loan facility and will be used for general corporate and working capital purposes.

The Facilities will mature on February 1, 2027. Advances under the Facilities bear interest at a floating rate per annum equal to, (a) the greater of (i) 0.10% and (ii) the LIBOR Rate, plus (b) 8.30%. The Loan Agreement provides for interest-only payments for the first forty-eight months following the Effective Date. Thereafter, amortization payments on the Facilities will be payable monthly in twenty-four equal installments; provided that the Company shall have the option to extend the interest-only period for an additional twelve months upon achievement of a certain minimum revenue level as more fully described in the Loan Agreement. The Facilities may be prepaid in full, subject to a prepayment charge of (i) 3.0%, if such prepayment occurs after the first anniversary of the Effective Date but on or prior to the second anniversary of the Effective Date, (ii) 2.0%, if such prepayment occurs after the second anniversary of the Effective Date but on or prior to the third anniversary of the Effective Date and (iii) 1.0%, if such prepayment occurs after the third anniversary of the Effective Date but on or prior to the fourth anniversary of the Effective Date. The Facilities are secured by a lien on substantially all of the assets of the Company, including intellectual property.

The Loan Agreement contains customary covenants and representations, including, without limitation, a minimum revenue covenant equal to 75% of each month's forecasted net product revenue (tested on a trailing six- month basis at the end of each fiscal month, commencing with the six month period ending on July 31, 2022) and other financial covenants, reporting obligations, and limitations on dispositions, changes in business or ownership, mergers or acquisitions, indebtedness, encumbrances, distributions and investments, transactions with affiliates and capital expenditures.

The events of default under the Loan Agreement include, without limitation, and subject to customary grace periods, (1) the Company's failure to make any payments of principal or interest under the Loan Agreement or other loan documents, (2) the Company's breach or default in the performance of any covenant under the Loan Agreement, (3) the occurrence of a material adverse effect or an event that is reasonably likely to result in a material adverse effect, (4) the existence of an attachment or levy on a material portion of funds of the Company or its subsidiaries, (5) the Company's insolvency or bankruptcy, or (6) the occurrence of certain material defaults with respect to any other indebtedness of the Company in excess of $500,000. If an event of default occurs, SLR is entitled to take enforcement action, including acceleration of amounts due under the Loan Agreement.

The Loan Agreement also contains other customary provisions, such as expense reimbursement and confidentiality. SLR has indemnification rights and the right to assign the Facilities, subject to customary restrictions.

The foregoing description of the Loan Agreement does not purport to be complete and is qualified in its entirety by reference to the Loan Agreement itself, which is filed as Exhibit 10.8 to this Annual Report on Form 10-K and is incorporated herein by reference.

On February 18, 2022, the Company utilized approximately $47.4 million of the Term Loan A Facility to pay off all obligations owing under and to terminate the Loan and Security Agreement dated as of October 1, 2020 by and between Canadian Imperial Bank of Commerce and the Company.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not Applicable

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Other than the information regarding our executive officers provided in Part I of this report under the heading "Business – Information about our Executive Officers," the information required by this Item is incorporated by reference to our definitive proxy statement for our 2022 annual meeting of stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2021.

Item 11. Executive Compensation.

The information required by this Item is incorporated by reference to our definitive proxy statement for our 2022 annual meeting of stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2021.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this Item is incorporated by reference to our definitive proxy statement for our 2022 annual meeting of stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2021.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this Item is incorporated by reference to our definitive proxy statement for our 2022 annual meeting of stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2021.

Item 14. Principal Accountant Fees and Services.

The information required by this Item is incorporated by reference to our definitive proxy statement for our 2022 annual meeting of stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2021.

PART IV

Item 15. Exhibit and Financial Statement Schedules.

(1) Financial Statements:

The following documents are included on pages F-1 through F-34 attached hereto and are filed as part of this Annual Report on Form 10-K.

(2) Financial Statement Schedules:

All financial statement schedules have been omitted because they are not applicable, not required or the information required is shown in the financial statements or the notes thereto.

(3) Exhibits.

Exhibit Number	Description
3.1	Tenth Amended and Restated Certificate of Incorporation of Vapotherm, Inc. (previously filed as Exhibit 3.1 to the Current Report on Form 8-K filed on November 20, 2018 (File No. 001-38740) and incorporated herein by reference)
3.2	Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation of Vapotherm, Inc. (previously filed as Exhibit 3.1 to the Current Report on Form 8-K filed on June 24, 2020 (File No. 001-38740) and incorporated herein by reference)
3.3	Amended and Restated Bylaws of Vapotherm, Inc. (previously filed as Exhibit 3.2 to the Current Report on Form 8-K filed on November 20, 2018 (File No. 001-38740) and incorporated herein by reference)
4.1	Form of Certificate of Common Stock of Vapotherm, Inc. (previously filed as Exhibit 4.1 to the Registration Statement on Form S-1 filed on November 5, 2018 (File No. 333-227897) and incorporated herein by reference)
4.2	Tenth Amended and Restated Registration Rights Agreement, dated September 27, 2018, among Vapotherm, Inc. and the Investors party thereto (previously filed as Exhibit 4.2 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
4.3	Form of Warrant to Purchase Series A Preferred Stock, dated March 14, 2012, issued by Vapotherm, Inc. (previously filed as Exhibit 4.4 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
4.4	Form of Warrant to Purchase Series A Preferred Stock, dated July 30, 2012, issued by Vapotherm, Inc. (previously filed as Exhibit 4.5 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
4.5	Warrant to Purchase Series A Preferred Stock, dated September 7, 2012, issued by Vapotherm, Inc. to Vapotherm Investors, LLC (previously filed as Exhibit 4.6 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
4.6	Form of Warrant to Purchase Series B Preferred Stock, issued by Vapotherm, Inc. to Comerica Bank (previously filed as Exhibit 4.8 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
4.7	Warrant to Purchase Series C Preferred Stock, dated July 28, 2015, issued by Vapotherm, Inc. to Comerica Bank (previously filed as Exhibit 4.9 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
4.8*	Form of Warrant to Purchase Common Stock, dated February 18, 2022, issued by Vapotherm, Inc. in Connection with Credit Facility
4.9*	Description of Securities of Vapotherm, Inc.
10.1	Lease, dated September 30, 2016, between Vapotherm, Inc. and Albany Road – 100 Domain LLC (previously filed as Exhibit 10.1 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.2	First Amendment to Lease, dated September 11, 2017, between Vapotherm, Inc. and Albany Road – 100 Domain LLC (previously filed as Exhibit 10.2 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.3	Second Amendment to Lease, dated June 6, 2018, between Vapotherm, Inc. and 100 Domain Drive EI, LLC (previously filed as Exhibit 10.3 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.4	Third Amendment to Lease, dated July 26, 2018, between 100 Domain Drive EI, LLC and Vapotherm, Inc. (previously filed as Exhibit 10.12 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)

Exhibit Number	Description
10.5	Fourth Amendment to Lease Agreement, dated August 23, 2020, between 100 Domain Drive EI, LLC, as administrator of the tenancy in common with 100 Domain Drive DD and Vapotherm, Inc. (previously filed as Exhibit 10.9 to the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2020 (File No. 001-38740) and incorporated herein by reference)
10.6	Loan and Security Agreement, dated as of October 21, 2020, between Canadian Imperial Bank of Commerce and Vapotherm, Inc. (previously filed as Exhibit 10.1 to the Current Report on Form 8-K filed on October 22, 2020 (File No. 001-38740) and incorporated herein by reference)
10.7*	First Amendment to Loan and Security Agreement, dated as of December 1, 2021, among Canadian Imperial Bank of Commerce, Vapotherm, Inc. and HGE Health Care Solutions, LLC
10.8*	Loan and Security Agreement, dated as of February 18, 2022, among SLR Investment Corp., as Collateral Agent, and the Lenders Thereto, Vapotherm, Inc., as Borrower, and HGE Health Care Solutions, LLC, Vapotherm Access Care Management Network, LLC, and Vapotherm Access Management Services, LLC, as Guarantor
10.9 †	Vapotherm, Inc. Amended and Restated 2005 Stock Incentive Plan, as amended (previously filed as Exhibit 10.6 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.10 †	Form of Incentive Stock Option Agreement pursuant to the Vapotherm, Inc. 2005 Stock Incentive Plan (previously filed as Exhibit 10.7 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.11 †	Vapotherm, Inc. Amended and Restated 2015 Stock Incentive Plan, as amended (previously filed as Exhibit 10.8 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.12 †	Vapotherm, Inc. 2015 Stock Incentive Plan French Qualifying Subplan (previously filed as Exhibit 10.26 to the Registration Statement on Form S-1 filed on November 5, 2018 (File No. 333-227897) and incorporated herein by reference)
10.13 †	Form of Incentive Stock Option Agreement pursuant to the Vapotherm, Inc. 2015 Stock Incentive Plan (previously filed as Exhibit 10.9 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.14 †	Vapotherm, Inc. 2018 Employee Stock Purchase Plan (previously filed as Exhibit 10.17 to the Registration Statement on Form S-1 filed on November 5, 2018 (File No. 333-227897) and incorporated herein by reference)
10.15 †	Vapotherm, Inc. Amended and Restated 2018 Equity Incentive Plan (previously filed as Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2021 (File No. 001-38740) and incorporated herein by reference)
10.16 †	Vapotherm, Inc. 2018 Equity Incentive Plan French Qualifying Subplan (previously filed as Exhibit 10.27 to the Annual Report on Form 10-K for the fiscal year ended December 31, 2018 (File No. 001-38740) and incorporated herein by reference)
10.17 †	Amended and Restated Vapotherm, Inc. 2018 Equity Incentive Plan French Qualifying Subplan, dated August 31, 2020 (previously filed as Exhibit 10.6 to the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2020 (File No. 001-38740) and incorporated herein by reference)
10.18 †	Form of Non-Statutory Employee Stock Option Agreement pursuant to the Vapotherm, Inc. 2018 Equity Incentive Plan (previously filed as Exhibit 10.20 to the Registration Statement on Form S-1 filed on November 5, 2018 (File No. 333-227897) and incorporated herein by reference)
10.19 †	Form of Non-Statutory Non-Employee Director Stock Option Agreement pursuant to the Vapotherm, Inc. 2018 Equity Incentive Plan (previously filed as Exhibit 10.21 to the Registration Statement on Form S-1 filed on November 5, 2018 (File No. 333-227897) and incorporated herein by reference)

Exhibit Number	Description
10.20 †	Form of Incentive Stock Option Agreement pursuant to the Vapotherm, Inc. 2018 Equity Incentive Plan (previously filed as Exhibit 10.22 to the Registration Statement on Form S-1 filed on November 5, 2018 (File No. 333-227897) and incorporated herein by reference)
10.21* †	Form of Restricted Stock Unit Agreement for Employees who are Executive Officers pursuant to the Vapotherm, Inc. Amended and Restated 2018 Equity Incentive Plan
10.22 †	Form of Restricted Stock Unit Agreement for Employees who are Executive Officers pursuant to the Vapotherm, Inc. 2018 Equity Incentive Plan (previously filed as Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2020 (File No. 001-38740) and incorporated herein by reference)
10.23 †	Form of Restricted Stock Unit Agreement for Non-Employee Directors pursuant to the Vapotherm, Inc. 2018 Equity Incentive Plan (previously filed as Exhibit 10.3 to the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2020 (File No. 001-38740) and incorporated herein by reference)
10.24 †	Form of Performance Stock Unit Agreement for Executive Officers pursuant to the Vapotherm, Inc. Amended and Restated 2018 Equity Incentive Plan (previously filed as Exhibit 10.1 to the Current Report on Form 8-K as filed on January 4, 2022 (File No. 001-38740) and incorporated herein by reference)
10.25 †	Vapotherm, Inc. 2018 Cash Incentive Plan (previously filed as Exhibit 10.19 to the Registration Statement on Form S-1 filed on November 5, 2018 (File No. 333-227897) and incorporated herein by reference)
10.26 †	Form of Indemnification Agreement between Vapotherm, Inc. and each Director and Officer (previously filed as Exhibit 10.11 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.27 †	Amended and Restated Employment Agreement dated October 17, 2018, between Vapotherm, Inc. and Joseph Army (previously filed as Exhibit 10.10 to the Registration Statement on Form S-1 filed on October 19, 2018 (File No. 333-227897) and incorporated herein by reference)
10.28* †	Form of Confidentiality, Non-Compete and Assignment of Inventions Agreement between Vapotherm, Inc. and each Officer
10.29 †	Letter Agreement dated October 17, 2018, between Vapotherm, Inc. and John Landry (previously filed as Exhibit 10.16 to the Registration Statement on Form S-1 filed on November 5, 2018 (File No. 333-227897) and incorporated herein by reference)
10.30 †	Indefinite Term Employment Contract by and between Vapotherm, Inc. and Gregoire Ramade, dated March 14, 2016 (previously filed as Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2019 (File No. 001-38740) and incorporated herein by reference)
10.31 †	First Amendment, dated September 15, 2020, to Indefinite Term Employment Contract by and between Vapotherm, Inc. and Gregoire Ramade, dated March 14, 2016 (previously filed as Exhibit 10.7 to the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2020 (File No. 001-38740) and incorporated herein by reference)
21.1*	Subsidiaries of Vapotherm, Inc.
23.1*	Consent of Grant Thornton LLP
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

Exhibit Number	Description
101.INS*	Inline XBRL Instance Document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith

** Furnished herewith

† Indicates management contract or compensatory plan

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized**.**

VAPOTHERM, INC.

Date: February 24, 2022

By: /s/ Joseph Army
Name: Joseph Army
Title: President and Chief Executive Officer
(*Principal Executive Officer*)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Name	Title	Date
/s/ Joseph Army Joseph Army	President, Chief Executive Officer and Director (*Principal Executive Officer*)	February 24, 2022
/s/ John Landry John Landry	Senior Vice President and Chief Financial Officer (*Principal Financial Officer*)	February 24, 2022
/s/ Dorota McKay Dorota McKay	Controller and Chief Accounting Officer (*Principal Accounting Officer*)	February 24, 2022
/s/ Anthony Arnerich Anthony Arnerich	Director	February 24, 2022
/s/ Lance Berry Lance Berry	Director	February 24, 2022
/s/ Lori Knowles Lori Knowles	Director	February 24, 2022
/s/ James Liken James Liken	Director	February 24, 2022
/s/ Mary Beth Moynihan Mary Beth Moynihan	Director	February 24, 2022
/s/ Donald Spence Donald Spence	Director	February 24, 2022
/s/ Elizabeth Weatherman Elizabeth Weatherman	Director	February 24, 2022

VAPOTHERM, INC.

Index to Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Vapotherm, Inc.

Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of Vapotherm, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and our report dated February 24, 2022 expressed an unqualified opinion.

Basis for opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical audit matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing a separate opinion on the critical audit matters or on the accounts or disclosures to which they relate.

Valuation of the HGE contingent consideration liability

As described further in Notes 1 and 3 to the consolidated financial statements, on November 13, 2020, the Company acquired HGE Health Care Solutions, LLC ("HGE"). The purchase price included potential future payments that are contingent on the future performance of certain HGE service offerings. Such liability is measured at fair value at each reporting date until the contingency is resolved. Changes in fair value are recognized in earnings. We identified the remeasurement of the contingent consideration liability associated with the HGE acquisition to its fair value as of December 31, 2021 as a critical audit matter.

The principal considerations for our determination that the fair value measurement of the HGE contingent consideration liability is a critical audit matter is that a high degree of subjective auditor judgment was required in evaluating certain inputs into the Monte Carlo model used to determine the fair value of the contingent consideration liability at December 31, 2021. Specifically, the key inputs included forecasted revenue and volatility rates. There was limited observable market

information, and the calculated fair value of the contingent consideration liability was sensitive to possible changes to these key inputs.

Our audit procedures related to the fair value measurement of the HGE contingent consideration liability included the following, among others:

- We obtained an understanding, evaluated the design and tested the operating effectiveness of internal controls over the Company's HGE contingent consideration liability valuation process, including controls over the assessment of key inputs listed above.
- In connection with our assessment of reasonableness of forecasted revenue used in the valuation, we compared forecasted revenue to historical actual results, projected industry growth rates and market factors and trends.
- In addition, we involved our valuation professionals with specialized skills and knowledge, who assisted in:
  - evaluating the valuation methods and model used by the Company to calculate the fair value of the contingent consideration liability; and
  - comparing the selected volatility used against publicly available volatility of comparable companies.

Quantitative impairment assessment – goodwill

As described further in Note 2 to the consolidated financial statements, the Company evaluates goodwill for impairment at the reporting unit level annually on October 1 of each year, or more frequently if events or circumstances indicate the carrying value of a reporting unit that includes goodwill might exceed the fair value of that reporting unit. We identified the estimation of the fair value of the HGE reporting unit in the annual quantitative goodwill impairment assessment as a critical audit matter.

The principal considerations for our determination that the annual quantitative goodwill impairment assessment is a critical audit matter are the significant management estimates and judgments related to forecasts of expected future cash flows used in the estimation of HGE reporting unit's fair value. Management's significant estimates and judgments include the determination of revenue growth rates, gross profit rates, operating expenses, projected long-term growth rates and discount rates. Changes in these assumptions could materially affect the calculated fair values of the reporting unit and the ultimate conclusion on whether impairment exists at the reporting unit.

Our audit procedures related to quantitative goodwill impairment testing included the following procedures, among others:

- Obtained an understanding, evaluated the design and tested the operating effectiveness of internal controls over management's quantitative goodwill impairment assessment, including those over the assessment of the key inputs listed above.
- Tested management's process for determining the fair values of the reporting units. This included evaluating the appropriateness of the valuation methods, testing the completeness and accuracy of data used by management, and evaluating management's significant assumptions used to project future cash flows, which included forecasted revenues, gross profit, and operating expenses.
- In addition, we involved valuation professionals with specialized skills and knowledge, who assisted in:
  - evaluating the valuation methodologies, models, long term growth rates and discount rates utilized by management.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2016.

New York, New York
February 24, 2022

VAPOTHERM, INC.

CONSOLIDATED BALANCE SHEETS

(In thousands, except share amounts)

	December 31,	
	2021	2020
Assets		
Current assets		
Cash and cash equivalents	$ 57,071	$ 113,683
Accounts receivable, net	10,909	23,488
Inventories	36,562	19,873
Prepaid expenses and other current assets	5,205	5,041
Total current assets	109,747	162,085
Property and equipment, net	22,157	20,573
Operating lease right-of-use assets	7,045	8,260
Restricted cash	253	1,853
Goodwill	15,300	16,226
Intangible assets, net	4,398	5,694
Deferred income tax assets	78	-
Other long-term assets	1,107	967
Total assets	$ 160,085	$ 215,658
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 5,923	$ 4,967
Contract liabilities	2,081	2,977
Accrued expenses and other current liabilities	28,559	34,033
Revolving loan facility	6,608	-
Total current liabilities	43,171	41,977
Long-term loans payable, net	39,726	39,653
Revolving loan facility	-	4,888
Deferred income tax liabilities	-	6
Other long-term liabilities	10,521	15,229
Total liabilities	93,418	101,753
Commitments and contingencies (Note 11)		
Stockholders' equity		
Preferred stock ($0.001 par value) 25,000,000 shares authorized; no shares issued and outstanding as of December 31, 2021 and 2020	-	-
Common stock ($0.001 par value) 175,000,000 shares authorized as of December 31, 2021 and 2020; 26,126,253 and 25,722,984 shares issued and outstanding as of December 31, 2021 and 2020, respectively	26	26
Additional paid-in capital	443,358	430,781
Accumulated other comprehensive income	26	41
Accumulated deficit	(376,743)	(316,943)
Total stockholders' equity	66,667	113,905
Total liabilities and stockholders' equity	$ 160,085	$ 215,658

The accompanying notes are an integral part of these consolidated financial statements.

VAPOTHERM, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands, except share and per share amounts)

	Year Ended December 31,		
	2021	2020	2019
Net revenue	$ 113,292	$ 125,733	$ 48,104
Cost of revenue	60,104	62,687	26,793
Gross profit	53,188	63,046	21,311
Operating expenses			
Research and development	18,410	16,956	13,376
Sales and marketing	60,140	65,065	37,689
General and administrative	31,375	24,039	18,410
Intangible asset impairment	323	-	-
Loss on disposal of property and equipment	105	-	-
Total operating expenses	110,353	106,060	69,475
Loss from operations	(57,165)	(43,014)	(48,164)
Other (expense) income			
Interest expense	(2,595)	(4,711)	(5,096)
Foreign currency gain (loss)	(225)	114	44
Interest income	91	257	860
Other income	18	-	-
Gain on litigation settlement	-	15	1,151
Loss on extinguishment of debt	-	(4,163)	-
Net loss before income taxes	(59,876)	(51,502)	(51,205)
Benefit for income taxes	(76)	-	(146)
Net loss	(59,800)	(51,502)	(51,059)
Other comprehensive income (loss)			
Foreign currency translation adjustments	(15)	(3)	44
Total other comprehensive income (loss)	(15)	(3)	44
Total comprehensive loss	$ (59,815)	$ (51,505)	$ (51,015)
Net loss per share - basic and diluted	$ (2.31)	$ (2.16)	$ (2.74)
Weighted-average number of shares used in calculating net loss per share, basic and diluted	25,936,970	23,818,447	18,604,707

The accompanying notes are an integral part of these consolidated financial statements.

VAPOTHERM, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share amounts)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2018	16,782,837	$ 17	$ 265,926	$ -	$ (214,382)	$ 51,561
Issuance of common stock in connection with public offering, net	3,570,750	4	48,272	-	-	48,276
Issuance of common stock warrants	-	-	293	-	-	293
Issuance of common stock upon repayment of nonrecourse loans	79,854	-	144	-	-	144
Issuance of common stock upon exercise of warrants	12,164	-	-	-	-	-
Issuance of common stock upon exercise of options	150,176	-	242	-	-	242
Issuance of common stock in connection with restricted stock awards	238,106	-	137	-	-	137
Issuance of common stock for services	17,644	-	265	-	-	265
Stock-based compensation expense	-	-	3,836	-	-	3,836
Foreign currency translation adjustments	-	-	-	44	-	44
Net loss	-	-	-	-	(51,059)	(51,059)
Balance at December 31, 2019	20,851,531	$ 21	$ 319,115	$ 44	$ (265,441)	$ 53,739
Issuance of common stock in connection with public offering, net	3,852,500	4	93,823	-	-	93,827
Issuance of common stock in connection with at-the-market offering, net	511,648	1	9,783	-	-	9,784
Issuance of common stock upon exercise of options	223,998	-	593	-	-	593
Issuance of common stock under the Employee Stock Purchase Plan	58,140	-	824	-	-	824
Issuance of common stock upon exercise of warrants	79,442	-	-	-	-	-
Issuance of common stock in connection with restricted stock units and awards	126,338	-	213	-	-	213
Issuance of common stock for services	19,387		441			441
Stock-based compensation expense	-	-	5,989	-	-	5,989
Foreign currency translation adjustments	-	-	-	(3)	-	(3)
Net loss	-	-	-	-	(51,502)	(51,502)
Balance at December 31, 2020	25,722,984	$ 26	$ 430,781	$ 41	$ (316,943)	$ 113,905
Issuance of common stock upon exercise of options	168,289	-	$ 1,511	-	-	$ 1,511
Issuance of common stock in connection with restricted stock units and awards	141,569	-	161	-	-	161
Issuance of common stock under the Employee Stock Purchase Plan	75,313	-	1,139	-	-	1,139
Issuance of common stock for services	18,098	-	413	-	-	413
Stock-based compensation expense	-	-	9,353	-	-	9,353
Foreign currency translation adjustments	-	-	-	(15)	-	(15)
Net loss	-	-	-	-	(59,800)	(59,800)
Balance at December 31, 2021	26,126,253	$ 26	$ 443,358	$ 26	$ (376,743)	$ 66,667

The accompanying notes are an integral part of these consolidated financial statements.

VAPOTHERM, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2021	**2020**	**2019**
Cash flows from operating activities			
Net loss	$ (59,800)	$ (51,502)	$ (51,059)
Adjustments to reconcile net loss to net cash used in operating activities			
Stock-based compensation expense	9,766	6,430	3,836
Depreciation and amortization	5,648	4,769	3,078
Loss on extinguishment of debt	-	4,163	-
Non-cash lease expense	1,764	1,140	-
Intangible asset impairment	323	-	-
Loss on disposal of property and equipment	260	250	101
Amortization of discount on debt	128	222	234
Change in fair value of contingent consideration	(1,813)	-	-
Provision for bad debts	(161)	72	104
Deferred income taxes	(76)	70	(147)
Provision for inventory valuation	70	(534)	(543)
Gain on litigation settlement	-	-	(1,151)
Changes in operating assets and liabilities:			
Accounts receivable	12,400	(14,810)	(833)
Inventories	(16,759)	(10,157)	5,606
Prepaid expenses and other assets	1,458	(483)	(1,218)
Accounts payable	798	1,461	720
Contract liabilities	(892)	2,494	150
Accrued expenses and other current liabilities	(6,724)	18,101	1,460
Operating lease liabilities, current and long-term	(1,761)	(1,154)	-
Net cash used in operating activities	(55,371)	(39,468)	(39,662)
Cash flows from investing activities			
Purchases of property and equipment	(5,895)	(9,797)	(4,747)
Acquisition of business, net of cash acquired	(1,304)	(8,372)	(1,560)
Net cash used in investing activities	(7,199)	(18,169)	(6,307)
Cash flows from financing activities			
Proceeds from issuance of common stock in connection with public offering, net	-	94,155	48,669
Proceeds from issuance of common stock in connection with at-the-market offering, net	-	9,927	-
Proceeds from issuance of common stock under Employee Stock Purchase Plan	1,139	824	-
Proceeds from exercise of stock options and purchase of restricted stock awards	1,511	593	386
Common stock offering costs	-	(471)	(393)
Proceeds from loans	-	40,000	10,500
Repayment of loans	-	(42,500)	-
Payments of debt extinguishment costs	-	(3,765)	-
Debt issuance costs	-	(475)	(29)
Proceeds from short-term line of credit and revolving loan facility	4,882	5,883	7,500
Repayments on short-term line of credit and revolving loan facility	(3,162)	(4,495)	(7,184)
Net cash provided by financing activities	4,370	99,676	59,449
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(12)	(10)	5
Net increase in cash, cash equivalents, and restricted cash	(58,212)	42,029	13,485
Cash, cash equivalents and restricted cash			
Beginning of year	115,536	73,507	60,022
End of year	$ 57,324	$ 115,536	$ 73,507
Supplemental disclosures of cash flow information			
Interest paid during the period	$ 2,466	$ 4,439	$ 4,793
Property and equipment purchases in accrued expenses	$ 422	$ 145	$ 135
Issuance of common stock upon vesting of restricted stock units and awards	$ 161	$ 213	$ 402
Issuance of warrants in conjunction with debt draw down	$ -	$ -	$ 293

The accompanying notes are an integral part of these consolidated financial statements.

1. Description of Business

Vapotherm, Inc. (the "Company") was founded in 1993 and reincorporated under the laws of the State of Delaware in 2013. The Company is a global medical technology company primarily focused on the care of patients of all ages suffering from the respiratory distress often associated with complex lung diseases such as chronic obstructive pulmonary disease ("COPD"), congestive heart failure ("CHF"), pneumonia, asthma and COVID-19. The Company's device solutions are focused on High Velocity Nasal Insufflation ("HVNI", or "High Velocity Therapy"), which delivers non-invasive ventilatory support to patients by providing heated, humidified, oxygenated air at high velocities through a small-bore nasal interface, and on closed loop control systems such as our Oxygen Assist Module, designed to automatically maintain SPO2 levels within a specified range for a defined period of time. The Company's digital solutions are focused on at home patient monitoring, using proprietary algorithms to predict impending respiratory episodes before they occur and coordinate timely intervention, obviating the need for costly hospital admissions and minimizing patient distress. The Company's clinical solutions include affiliations with leading pulmonologists and other clinicians, offering both in person and virtual care, as well as its own call center staffed by experienced nurses. While these device, digital and clinical solutions function independently, the Company believes leveraging the three together can create a unique healthcare ecosystem, focused on delivering high quality, efficient respiratory care.

High Velocity Therapy is an advanced form of high flow therapy that is differentiated due to its ability to deliver breathing gases, including oxygen, at a high velocity, for the treatment of spontaneously breathing patients with either Type 1 hypoxic respiratory distress, like that experienced by patients with pneumonia or COVID-19, or Type 2 hypercapnic respiratory distress, like that experienced by patients with COPD. The Company's Precision Flow systems, which use High Velocity Therapy technology, are clinically validated alternatives to, and address many limitations of, the current standard of care for the treatment of respiratory distress in a hospital setting. The Company's next generation High Velocity Therapy system, known as HVT 2.0, received 510k clearance from the FDA in 2021 and is currently in limited market release. The HVT 2.0 platform is approved for therapy in multiple settings of care, including the home.

In certain countries outside the United States, the Company currently offers its Oxygen Assist Module, or OAM, which launched in the United Kingdom, select European markets, and Israel in late 2020. The Oxygen Assist Module can be used with most versions of the Company's Precision Flow system as well as the HVT 2.0. The Oxygen Assist Module helps clinicians maintain a patient's pulse oxygen saturation, or SpO2, within a target SpO2 range over a greater period of time while requiring significantly fewer manual adjustments to the equipment. Maintenance of the prescribed oxygen saturation range may reduce the health risks associated with dosing too much, or too little, oxygen, particularly in neonates. In neonates, these risks include visual or developmental impairment or death.

The Company sells its Precision Flow systems to hospitals through a direct sales organization in the United States, the United Kingdom and Germany and through distributors in other select countries outside of those countries. The Oxygen Assist Module is sold through a direct sales organization in the United Kingdom and Germany and through distributors in Europe and the Middle East. The Company is in the process of seeking FDA approval to market the Oxygen Assist Module in the United States. In addition, the Company employs field-based clinical educators who focus on medical education and training in the effective use of its products and help facilitate increased adoption and utilization. The Company focuses on physicians, respiratory therapists and nurses who work in acute hospital settings, including the ED and adult, pediatric and neonatal ICUs. The Company's relationship with these clinicians is particularly important, as it enables the Company's products to follow patients through the care continuum.

In August 2019, the Company completed a public offering of 3,570,750 shares of common stock, which included the full exercise by the underwriters of their option to purchase 465,750 shares of common stock, at a price of $14.50 per share, which raised net proceeds of $48.3 million after deducting the underwriting discount of $3.1 million and offering expenses of $0.4 million.

On December 20, 2019, the Company entered into an Open Market Sales Agreement (the "ATM Agreement") with Jefferies LLC ("Jefferies"), under which the Company may offer and sell its common stock having aggregate sales proceeds of up to $50.0 million from time to time through Jefferies as its sales agents. During April 2020, the Company sold 511,648 shares of common stock pursuant to the ATM Agreement for gross proceeds of $10.2 million, or $9.8 million net of commissions and offering expenses.

In May 2020, the Company completed a public offering of 3,852,500 shares of common stock, which included the full exercise by the underwriters of their option to purchase 502,500 shares of common stock, at a price of $26.00 per share, which raised net proceeds of $93.8 million after deducting the underwriting discount of $6.0 million and offering expenses of $0.3 million.

On November 13, 2020, the Company acquired HGE Health Care Solutions LLC ("HGE"). The Company undertook the acquisition to expand its capabilities by providing a remote monitoring platform designed to empower respiratory patients with COPD and providers to manage day-to-day symptoms, prevent exacerbations, lower costs and improve patient quality of life. See Note 3 "Business Combinations" to these consolidated financial statements for details of this transaction.

On November 2, 2021, HGE acquired PCI Management Group LLC ("PCI") and became affiliated with a physician practice managed by PCI, Pulmonary Care Innovations, PLLC ("RespirCare"), which the Company consolidates for accounting and tax purposes. See Note 3 "Business Combinations" to these consolidated financial statements for details of this transaction.

2. Significant Accounting Policies

Basis of Presentation

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

Principles of Consolidation

These consolidated financial statements include the financial statements of Solus Medical Ltd. ("Solus"), a wholly owned subsidiary of the Company based in the United Kingdom, HGE, a wholly owned subsidiary of the Company located in the United States, Vapotherm Deutschland GmbH, a wholly owned subsidiary of the Company located in Germany, and PCI and RespirCare, which were acquired by HGE in the fourth quarter of 2021. All intercompany accounts and transactions have been eliminated upon consolidation.

Segment Information

Operating segments are defined as components of an enterprise for which separate discrete financial information is available and evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. The Company globally manages the business within one reporting segment, Vapotherm, Inc. and three reporting units, Vapotherm, Solus and HGE. Segment information is consistent with how management reviews the business, makes investing and resource allocation decisions and assesses operating performance.

The majority of the Company's long-term assets are located in the United States. Long-term assets located outside the United States total $2.4 million and $0.2 million at December 31, 2021 and 2020, respectively.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires the Company to make judgments, assumptions, and estimates that affect the reported amounts of assets, liabilities, revenue and expenses, and the related disclosure of contingent assets and liabilities. The Company evaluates its estimates on an ongoing basis. The Company bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Significant estimates relied upon in preparing these consolidated financial statements include calculation of stock-based compensation, fair values of acquired assets and liabilities, including goodwill and intangibles assets, realizability of inventories, allowance for bad debts, accrued expenses, including the fair value of contingent consideration, the valuation allowances against deferred income tax assets, and assessments of impairment with respect to long-lived and intangible assets. Actual results may differ from these estimates.

Reclassification

Certain amounts in 2020 and 2019 have been reclassified to conform to the presentation in 2021. None of the reclassifications had any impact to the Company's results of operations.

Financial Instruments and Concentrations of Credit Risk

As of December 31, 2021 and 2020, the Company's financial instruments were comprised of cash and cash equivalents, restricted cash, accounts receivable, accounts payable and debt, the carrying amounts of which approximated fair value due to the short-term nature or market interest rates. All of the Company's cash and cash equivalents are maintained at creditworthy financial institutions. At December 31, 2021 and 2020, deposits exceed the amount of any insurance provided.

The Company extends credit to customers in the normal course of business but typically does not require collateral or any other security to support amounts due. Management performs ongoing credit evaluations of its customers. An allowance for potentially uncollectible accounts is provided based on history, economic conditions, and composition of the accounts receivable aging. In some cases, the Company makes allowances for specific customers based on these and other factors. Provisions for the allowance for doubtful accounts are recorded in general and administrative expenses in the accompanying consolidated statements of comprehensive loss.

Supplier Risk

The Company obtains some of the components and subassemblies included in its Precision Flow systems and obtains its Oxygen Assist Module from single source suppliers and the partial or complete loss of one or more of these suppliers could cause significant production delays, an inability to meet customer demand and a substantial loss in revenue.

Foreign Currency and Foreign Operations

The functional currency of the Company is the currency of the primary economic environment in which the entity operates, which is the U.S. dollar. For the Company's non-U.S. subsidiaries that transacts in a functional currency other than the U.S. dollar, assets and liabilities are translated at current rates of exchange at the balance sheet date. Income and expense items are translated at the average foreign currency exchange rates for the period. Adjustments resulting from the translation of the financial statements of its foreign operations into U.S. dollars are excluded from the determination of net loss and are recorded in accumulated other comprehensive income (loss), a separate component of stockholders' equity.

Realized foreign currency gains or losses arising from transactions denominated in foreign currencies are recorded in other (expense) income in the consolidated statements of comprehensive loss. Unrealized foreign currency gains or losses arising from transactions denominated in foreign currencies are recorded in accumulated other comprehensive income (loss).

Cash, Cash Equivalents, and Restricted Cash

The Company considers all highly liquid temporary investments purchased with original maturities of 90 days or less to be cash equivalents. The Company holds restricted cash related to certificates of deposits and collateral in relation to lease agreements. As of December 31, 2021, $1.1 million of the Company's $57.3 million of cash, cash equivalents and restricted cash balance was located outside the United States.

The following table presents the components of total cash, cash equivalents, and restricted cash as set forth in the Company's consolidated statements of cash flows:

	December 31,	
	2021	2020
Cash and cash equivalents	$ 57,071	$ 113,683
Restricted cash	253	1,853
Total cash, cash equivalents, and restricted cash	$ 57,324	$ 115,536

Inventories

Inventories consist of finished goods and component parts and are valued at the lower of cost or net realizable value, determined by the first-in, first-out ("FIFO") method. On a quarterly basis, the Company evaluates the carrying costs of both finished goods and component part items. To the extent that such costs exceed future demand estimates, exhibit historical

turnover at rates less than current inventory levels, or exceed estimated selling prices less costs to sell, the Company reduces the carrying value of inventories to its net realizable value. The Company only capitalizes pre-launch inventories when purchased for commercial sale and it deems regulatory approval to be probable.

Public Offering Costs

The Company incurs public offering costs consisting of legal, accounting and other costs directly attributable to the Company's public offerings and defers such costs until the closing of the offerings. Upon closing of offerings, such costs are netted against the proceeds received. As of December 31, 2021 and 2020, no amounts were deferred.

Property and Equipment

Property and equipment are recorded at cost. Depreciation is recognized over the estimated useful lives of the related assets on a straight-line basis, except for tooling for which depreciation is recognized utilizing the units-of-production method prospectively beginning on January 1, 2021. The Company changed to the units-of-production method to better reflect the pattern of economic consumption of the tooling. The prospective change to the units-of-production depreciation method had an immaterial impact on the Company's results of operations for the year ended December 31, 2021. Amortization of leasehold improvements is computed on a straight-line basis over the shorter of the remaining lease term or the estimated useful lives of the improvements and is included in depreciation expense. Demonstration equipment represents internally manufactured capital equipment that is used on-site at trade shows and at customer locations to demonstrate the Precision Flow system. Depreciation expense on demonstration equipment is recorded in sales and marketing expense in the consolidated statements of comprehensive loss. Placement and evaluation systems represent capital equipment placed at customer locations under placement or evaluation agreements for which depreciation expense is included in cost of revenue in the accompanying consolidated statements of comprehensive loss. Effective April 1, 2021, the Company changed the estimated useful life for certain of its demonstration, placement and evaluation units from five years to seven years. This prospective change had an immaterial impact on the Company's results of operations for the year ended December 31, 2021.

When impairment indicators are present, the Company evaluates the recoverability of its long-lived assets. If the assessment indicates an impairment, the affected assets are written down to fair value. There were no impairments of property and equipment during 2021, 2020, or 2019.

Repairs and maintenance are expensed as incurred. Expenditures that increase the value or productive capacity of assets are capitalized. When property and equipment are retired, sold, or otherwise disposed of, the asset's carrying amount and related accumulated depreciation are removed from the accounts and any gain or loss is included in operating expenses.

The lives used in computing straight-line depreciation are as follows:

	Number of Years
Equipment	3 - 7
Furniture	5 - 7
Manufacturing equipment	3 - 10
Software	2 - 3
Demonstration, placements and evaluation units	3 - 7
Leasehold improvements	Lesser of life of lease or 10 years

Intangible Assets

Intangible assets are related to customer relationships, developed technology, customer agreements, trademarks and trade names and are amortized on a straight-line basis over their useful lives. Amortization is recorded within sales and marketing expenses in the consolidated statements of comprehensive loss for customer-related intangible assets while amortization of other intangible assets is included within general and administrative expenses in the consolidated statements of comprehensive loss. Intangible assets are evaluated for impairment whenever events or circumstances indicate an asset may be impaired. During the fourth quarter of 2021, the Company recorded an impairment charge of $0.3 million related to trade names and trademarks no longer in use. There were no impairments of intangible assets during 2020 or 2019.

Goodwill

Goodwill represents the difference between the purchase price and the fair value of the identifiable tangible and intangible net assets when accounted for using the purchase method of accounting in a business combination. Goodwill is not amortized but reviewed for impairment. Goodwill is reviewed annually, as of October 1, and whenever events or changes in circumstances indicate that the carrying value of the goodwill may not be recoverable.

The Company compares the fair value of its reporting units to their carrying values. If the carrying value of the net assets assigned to a reporting unit exceeds the fair value of the reporting unit, the Company would record an impairment loss equal to the difference. There was no impairment of goodwill during 2021, 2020 or 2019.

Leases

The Company's operating leases primarily consist of real estate leases for office, manufacturing, research and development, and warehouse space, as well as certain vehicle and equipment leases. Prior to adopting ASU 2016-02, Leases (Topic 842) ("ASC 842") effective January 1, 2020, the Company followed the lease accounting guidance as issued in ASC 840, Leases ("ASC 840"). Under ASC 840, the Company classified its leases as operating or capital leases based on evaluation of certain criteria of the lease agreement. For leases that contained rent escalations or rent holidays, the Company recorded the total rent expense during the lease term on a straight-line basis over the lease term and recorded the difference between the lease payments and the straight-line rent expense as deferred rent on the balance sheet. Any tenant improvement allowances received from the lessor were recorded as a reduction to rent expense over the lease term.

ASC 842 requires lessees to recognize leases on the balance sheet as a lease liability with a corresponding right-of-use asset, subject to certain permitted accounting policy elections. Under ASC 842, the Company determines whether a contract is or contains a lease at the inception of the contract. This determination is based on whether the contract provides the Company the right to control the use of a physically distinct asset and substantially all of the capacity of an asset. Leases with an initial noncancelable term of twelve months or less that do not include an option to purchase the underlying asset that the Company is reasonably certain to exercise are classified as short-term leases. The Company has elected as an accounting policy to exclude from the consolidated balance sheets the right-of-use assets and lease liabilities related to short-term leases. The Company recognizes rent expense for its operating leases on a straight-line basis over the term of the lease.

Certain of the Company's leases include options to extend or terminate the lease at its sole discretion. The Company does not consider in the measurement of right-of-use assets and lease liabilities an option to extend or terminate a lease if the Company is not reasonably certain to exercise the option. As of December 31, 2021, the Company has not included any options to extend its leases in its measurement of the related right-of-use assets or lease liabilities as the Company is not reasonably certain it will exercise the options.

Certain of the Company's leases include covenants that oblige the Company, at its sole expense, to repair and maintain the leased asset periodically during the lease term. The Company is not a party to any leases that contain residual value guarantees.

Many of the Company's leases include fixed and variable payments. Among other charges, variable payments related to real estate leases include real estate taxes, insurance, operating expenses, and common area maintenance, which are usually billed at actual amounts incurred proportionate to the Company' rented square feet of the building. Variable payments related to vehicle and equipment leases relate to usage of the underlying asset, sales and use tax, and value-added tax. Variable payments that do not depend on an index or rate are expensed as incurred and are not included in the measurement of the lease liability.

In accordance with the guidance in ASC 842, components of a lease should be split into three categories: lease components (e.g. buildings, vehicles, etc.), non-lease components (e.g. common area maintenance, consumables, etc.), and non-components (e.g. property taxes, insurance, etc.). The fixed and in-substance fixed contract consideration (including any related to non-components) must be allocated to the lease components and non-lease components based on their relative fair values. The Company elected the accounting policy to not separate lease and non-lease components for its real estate, vehicle, and equipment leases. Therefore, each lease component and the related non-lease components and non-components are accounted for together as a single component.

The Company measures its lease liability for each leased asset as the present value of lease payments, as defined in ASC 842, discounted using a discount rate specific to the terms of the underlying lease. The Company's right-of-use assets are equal to the related lease liabilities, adjusted for lease incentives received including tenant improvement allowances, initial

direct costs incurred related to the lease, and payments made to the lessor prior to the lease commencement date. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company estimates its incremental borrowing rate for each leased asset based on the interest rate the Company would incur to borrow an amount equal to the lease payments on a collateralized basis over a similar term in a similar economic environment.

Contingent Consideration

Contingent consideration is initially recorded at its acquisition date fair value, is remeasured at each reporting date and is included in accrued expenses and other current liabilities and other long-term liabilities in the Company's consolidated balance sheets. Fair value is estimated utilizing several key assumptions and is remeasured at each reporting period with changes in fair value being recorded as a component of general and administrative expense in the consolidated statements of comprehensive loss . See Note 3 "Business Combinations" for a rollforward of contingent consideration and Note 9 "Accrued Expenses and Other Current Liabilities and Other Long-Term Liabilities" for balances at December 31, 2021 and 2020.

Product Warranty

The Company provides its customers with a standard one-year warranty on its capital equipment sales. Warranty costs are accrued based on actual historical trends and estimated at time of sale. The warranty liability is included within accrued expenses and other current liabilities in the consolidated balance sheets. A roll-forward of the Company's warranty liability is as follows:

Balance at December 31, 2019	$	225
Provisions for warranty obligations		636
Settlements		(300)
Balance at December 31, 2020		561
Provisions for warranty obligations		205
Settlements		(436)
Balance at December 31, 2021	$	330

Deferred Financing Costs

Direct financing costs are deferred and amortized as a component of interest expense, over the term of the related debt. The long-term portion of the balance of unamortized deferred financing costs related to Company's term loan is presented as a reduction of the related borrowing arrangement liability and totals $0.3 million at each of December 31, 2021 and 2020. The unamortized deferred financing costs related to the Company's revolving facility are recorded in prepaid expenses and other current assets in the Company's consolidated balance sheet and totals less than $0.1 million at December 31, 2020. There were no unamortized deferred financing costs recorded in prepaid and other current assets at December 31, 2021.

Insurance

Effective January 1, 2020, the Company became self-insured for certain obligations related to health insurance. The Company also purchases stop-loss insurance to protect itself from material losses. Judgments and estimates are used in determining the potential value associated with reported claims and for events that have occurred but have not been reported. The Company's estimates consider expected claim experience and other factors. Receivables for insurance recoveries are recorded as assets, on an undiscounted basis. The Company's liabilities are based on estimates, and, while the Company believes that its accruals are adequate, the ultimate liability may be significantly different from the amounts recorded. Changes in claims experience, the Company's ability to settle claims or other estimates and judgments used by management could have a material impact on the amount and timing of expense for any period.

Revenue Recognition

The Company's revenue is primarily derived from the sale of products, leases and services. Product revenue consists of capital equipment and single-use disposables that are shipped and billed to customers both domestically and internationally. The Company's main capital equipment products are the Precision Flow systems, the Vapotherm Transfer Unit 2.0 and Q50 compressor. The Company's main disposable products are single-use disposables and nasal interfaces, or cannulas, and adaptors. Lease revenue consists of two components which include capital equipment that the Company leases to its customers and, in certain situations, an allocation from disposable revenue to other lease revenue upon the sale of disposable products in bundled arrangements involving the placement of Precision Flow capital units for use by the customer at no upfront charge in

connection with the customer's ongoing purchase of disposable products. Service revenue consists of fees associated with routine service of capital units and the sale of extended service contracts and preventative maintenance plans, which are purchased by a small portion of the Company's customer base. In addition, the Company sells small quantities of component parts in the United States, United Kingdom and to third-party international service centers who provide service on Precision Flow capital units outside of the United States and United Kingdom. Service revenue also includes fees from remote patient monitoring services sold through Vapotherm Access. Freight revenue is based upon actual freight costs plus a percentage markup of such costs associated with the shipment of products domestically, and to a lesser extent, internationally, and is included in service revenue. Rebates and fees consist of contractually obligated administrative fees and percentage-of-sales rebates paid to Group Purchasing Organizations ("GPOs"), Integrated Delivery Networks ("IDNs") and distributor partners and accounted for as a reduction of revenue.

Under the Financial Accounting Standard Board's ("FASB") Accounting Standards Codifications ("ASC") 606, Revenue from Contracts with Customers ("ASC 606"), revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and assesses whether each promised good or service is distinct and determines those that are performance obligations. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. Sales, value-added, and other taxes collected on behalf of third parties are excluded from revenue. The Company's standard payment terms are generally 30 days from the date of sale.

Contracts with customers may contain multiple performance obligations. For such arrangements, the transaction price is allocated to each performance obligation based on the estimated relative stand-alone selling prices of the promised products or services underlying each performance obligation. The Company determines stand-alone selling prices based on the price at which the performance obligation is sold separately. If the stand-alone selling price is not observable through past transactions, the Company estimates the stand-alone selling price taking into account available information such as market conditions and internally approved pricing guidelines related to the performance obligations. Revenue is generally recognized when the customer obtains control of the Company's product, which generally occurs at a point in time upon shipment based on the contractual shipping terms of a contract.

Product and service revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products or services to a customer. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing the expected value amount method to which the Company expects to be entitled. As such, revenue on sales is recorded net of prompt pay discounts and payments made to GPOs, IDNs and distributors. Variable consideration is included in the transaction price if, in the Company's judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur. Determination of whether to include estimated amounts in the transaction price is based largely on an assessment of the Company's anticipated performance and all information (historical, current and forecasted) that is reasonably available. The Company believes that the estimates it has established are reasonable based upon current facts and circumstances. Applying different judgments to the same facts and circumstances could result in different estimates.

When determining the transaction price of a contract, an adjustment is made if payment from a customer occurs either significantly before or significantly after performance, resulting in a significant financing component. Applying a practical expedient under ASC 606, the Company does not assess whether a significant financing component exists if the period between when the Company performs its obligations under the contract and when the customer pays is one year or less. None of the Company's contracts contained a significant financing component during the years ended December 31, 2021, 2020 or 2019.

The Company's contracts with its customers have a duration of less than one year. Therefore, the Company has elected to apply a practical expedient and recognizes the incremental costs of obtaining contracts as an expense. These costs are included in sales and marketing expense in the accompanying consolidated statements of comprehensive loss.

Lease Revenue

The Company also enters into agreements to lease its capital equipment. For such sales, the Company accounts for revenue under ASC 842 and assesses and classifies these transactions as sales-type or operating leases based on whether the lease transfers ownership of the equipment to the lessee by the end of the lease term. This criterion is met in situations in which the lease agreement provides for the transfer of title at or shortly after the end of the lease term. Equipment included in arrangements including transfer of title are accounted for as sales-type leases and the Company recognizes the present value of the lease payments due over the lease term as revenue at the inception of the lease. The Company records the present value of

future lease payments in prepaid expenses and other current assets in the accompanying consolidated balance sheets; these amounts totaled $0.7 million and $2.7 million at December 31, 2021 and 2020, respectively. Equipment included in arrangements that do not include the transfer of title, nor any of the sales-type or direct financing lease criteria, are accounted for as operating leases and revenue is recognized on a straight-line basis over the term of the lease. Prior to the adoption of ASC 842 effective January 1, 2020, the Company accounted for such transactions under ASC 840 and there was no change in the Company's accounting for such transactions upon the adoption of ASC 842.

The Company also enters into agreements involving the placement of Precision Flow capital units for use by the customer at no upfront charge in connection with the customer's ongoing purchase of disposable products. In these bundled arrangements, revenue recognized for the sale of the disposables is allocated between disposable revenue and other lease revenue based on the estimated relative stand-alone selling prices of the individual performance obligations.

Shipping and Handling Costs

Amounts billed to customers for shipping and handling are included in service revenue. Shipping and handling costs are included in costs of sales. The total costs of shipping and handling for the years ended December 31, 2021, 2020 and 2019 totaled $1.6 million, $2.5 million and $1.0 million, respectively.

Sales and Value-Added Taxes

When required by local jurisdictions, the Company bills its customers for sales tax and value-added tax calculated on each sales invoice and records a liability for the sales and value-added tax payable, which is included in accrued expenses and other current liabilities in the consolidated balance sheets. Sales tax and value-added tax billed to a customer are not included in the Company's revenue.

Research and Development Costs

Research and development costs are expensed when incurred and are related primarily to product design, prototype development and testing, the investigation of possible follow-on product enhancements and new product releases, and investigation of complementary technologies potentially available to enhance the Company's offerings in the marketplace.

Stock-Based Compensation

The Company maintains an equity incentive plan to provide long-term incentives for employees, consultants, and members of the board of directors. The plan allows for the issuance of non-statutory and incentive stock options, restricted stock, unrestricted stock, stock units, including restricted stock units, and stock appreciation rights to employees, consultants and non-employee directors. The Company recognizes stock-based compensation expense for awards of equity instruments to employees and non-employees based on the grant date fair value of those awards in accordance with ASC Topic 718, Stock Compensation ("ASC 718"). ASC 718 requires all equity-based compensation awards, including grants of restricted shares and stock options, to be recognized as expense in the consolidated statements of comprehensive loss based on their grant date fair values.

The fair value of each option grant is estimated on the grant date using the Black-Scholes option pricing model. The fair value of restricted stock and restricted stock units is measured at the market value of the related shares of the Company's common stock on the grant date. The fair value is then amortized on a straight-line basis over the requisite service period of the awards, which is generally the vesting period and is generally three years. For performance-based awards, the related compensation cost is amortized over the performance period on an accelerated attribution basis. Compensation cost associated with performance awards is based on fair value on the date of grant and the number of units expected to be earned after assessing the probability that certain performance criteria will be met and the associated targeted payout level that is forecasted will be achieved. Cumulative adjustments are recorded each quarter to reflect estimated outcomes of the performance-related conditions until the results are determined and settled. Use of a valuation model requires management to make certain assumptions with respect to selected model inputs, including the expected life (weighted average period of time that the options granted are expected to be outstanding), the volatility of the Company's common stock and an assumed risk-free interest rate. Expected volatility is calculated based on historical volatility of a group of publicly traded companies that the Company considers a peer group. The expected life is estimated using the simplified method for "plain vanilla" options. The risk-free interest rate is based on U.S. Treasury rates with a remaining term that approximates the expected life assumed at the date of grant. No dividend yield is assumed as the Company does not pay, and does not expect to pay, dividends on its common stock. The Company estimates forfeitures based on historical experience with pre-vested forfeitures. To the extent actual forfeitures differ from the estimate, the difference is recorded to compensation expense in the period of the forfeiture.

The Company recognizes stock-based expense for shares of its common stock issued pursuant to the Vapotherm, Inc. 2018 Employee Stock Purchase Plan ("ESPP") on a straight-line basis over the related offering period. The Company estimates the fair value of shares to be issued under the ESPP based on a combination of options valued using the Black-

Scholes option pricing model. The expected life is determined based on the contractual term. Dividend yield, risk-free interest rate, forfeiture rates and expected volatility are estimated in a manner similar to option grants described above.

Net Income (Loss) per Share

Basic net income (loss) per share is computed by dividing the net income (loss) by the weighted average number of common shares outstanding for the period. Diluted net income (loss) per share is computed by dividing the net income (loss) by the weighted average number of common shares outstanding for the period, including potential dilutive common shares. For purpose of this calculation, outstanding options, unvested restricted stock units, unissued employee stock purchase plan shares, and warrants are considered potential dilutive common shares.

Income Tax

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Deferred taxes are determined based on the difference between the financial reporting and tax basis of assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes recognized in the consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the consolidated financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

Recently Issued Accounting Pronouncements

The Jumpstart Our Business Startups Act (the "JOBS Act") allows an emerging growth company ("EGC") to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements were made applicable to private companies. Since the Company was an EGC prior to December 31, 2020, the Company had elected to use the adoption dates applicable to private companies. As a result, the Company's consolidated financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective date for new or revised accounting standards that are applicable to public companies. Since the Company no longer qualified as an EGC as of December 31, 2020, subsequent to that date, it adopts future accounting pronouncements at dates applicable to public companies.

Credit Losses (Topic 326):

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). This standard requires that credit losses be reported using an expected losses model rather than the incurred losses model that is currently used and establishes additional disclosures related to credit risks. In November 2019, the FASB issued ASU 2019-10, Financial Instruments-Credit Losses (Topic 326), Derivative and Hedging (Topic 815) and Leases (Topic 842), which defers the effective date for ASU 2016-13 to interim and annual periods beginning after December 15, 2022 for private companies, EGCs following private company adoption dates, or public entities meeting the definition of smaller reporting companies as of the date of issuance of this update. Since the Company met the definition of an EGC following private company adoption dates at the time of issuance of this standard, the Company is not required to adopt ASU 2016-13 until January 1, 2023. The Company has not yet determined the effects, if any, that the adoption of ASU 2016-13 may have on its financial position, results of operations, cash flows, or disclosures.

3. Business Combinations

PCI and RespirCare

On November 2, 2021, HGE acquired PCI and became affiliated with a physician practice managed by PCI, RespirCare, which the Company consolidates for accounting and tax purposes. The principal assets acquired included goodwill and property and equipment. The Company undertook the acquisition in order to increase the number of patients for Vapotherm Access remote patient monitoring service.

The purchase price, net of cash acquired, of $1.7 million was funded with cash payments of approximately $1.3 million and the settlement of $0.4 million of preexisting transactions. The acquisition has been accounted for as an acquisition of a business. The following table summarizes the preliminary purchase price allocation that includes the fair values of the separately identifiable assets acquired and liabilities assumed as of November 2, 2021:

Cash	$	39
Accounts receivable		101
Prepaids and other current assets		11
Property and equipment		397
Operating lease right-of-use assets		316
Goodwill		1,302
Other long-term assets		9
Total assets acquired		2,175
Accounts payable		(29)
Other current liabilities		(111)
Other long-term liabilities		(264)
Total liabilities assumed		(404)
Total purchase price	$	1,771

The excess of purchase consideration over the fair value of net tangible assets acquired was recorded as goodwill. Goodwill associated with the acquisition was primarily attributable to the expansion opportunity of the Vapotherm Access remote monitoring platform and the value of the acquired workforce. The goodwill is deductible for tax purposes. The fair values assigned to tangible assets acquired and liabilities assumed are based on management's estimates and assumptions. There were no intangible assets identified as part of the acquisition. The fair values of assets acquired and liabilities assumed may be subject to change as additional information is received. The Company expects to finalize the purchase price allocation as soon as practicable, but not later than one year from the acquisition date.

The Company has included the financial results of PCI and RespirCare in the consolidated financial statements from the date of acquisition. Pro forma financial information has not been presented as the impact to the financial results is immaterial. Net revenue and net loss related of PCI and RespirCare since the date of acquisition were immaterial. The transaction costs associated with the acquisition were approximately $0.5 million and were recorded in general and administrative expense as incurred during 2021.

HGE

On November 13, 2020, the Company completed the acquisition of all outstanding membership interests of HGE, whose principal assets included intangible assets related to customer relationships, developed technology, trademarks and trade names. The Company undertook the acquisition to expand its capabilities by providing a remote monitoring platform which is designed to empower respiratory patients with COPD and providers to manage day-to-day symptoms, prevent exacerbations, lower costs and improve patient quality of life.

The Company finalized its valuation of the assets acquired and liabilities assumed during the three months ended March 31, 2021 and recorded an adjustment to correct immaterial errors related to the acquisition which reduced the

preliminary purchase price by $2.3 million and decreased goodwill, intangible assets and other current liabilities by $2.2 million, $0.3 million and $0.3 million, respectively.

The purchase price, net of cash acquired, of $19.3 million was funded with an initial cash payment of $8.4 million and $10.9 million of contingent consideration. The contingent consideration is payable in cash or common stock, at the sole discretion of the Company, and will be remitted in future milestone payments, one following calendar year 2021, one following calendar year 2022, and one following calendar year 2023. The final three payments will be adjusted up or down based on the revenue performance of certain HGE service offerings during those three years. The acquisition has been accounted for as an acquisition of a business.

The following table summarizes the final purchase price allocation that includes the fair values of the separately identifiable assets acquired and liabilities assumed as of November 13, 2020:

Cash	$	2
Accounts receivable		518
Inventory		3
Prepaids and other current assets		238
Property and equipment		225
Operating lease right-of-use assets		2,329
Goodwill		13,398
Intangible assets		5,180
Other long-term assets		45
Total assets acquired		21,938
Accounts payable		(32)
Accrued expenses and other current liabilities		(620)
Contract liabilities		(31)
Other long-term liabilities		(1,951)
Total liabilities assumed		(2,634)
Total purchase price	$	19,304

The excess of purchase consideration over the fair value of net tangible and identifiable intangible assets acquired was recorded as goodwill. The fair values assigned to tangible and identifiable intangible assets acquired and liabilities assumed are based on management's estimates and assumptions as of the date of acquisition.

The fair value of the intangible asset associated with customer relationships was estimated using a discounted cash flow method with the application of the multi-period excess earnings method. Under this method, an intangible asset's fair value is equal to the present value of the incremental after-tax cash flows attributable to only the subject intangible assets after deducting contributory asset charges. An income and expense forecast was built based upon specific intangible asset revenue and expense estimates. The fair value of the intangible asset associated with developed technology, trademarks and trade names were valued using the relief from royalty method. Under this method, an intangible asset's fair value is equal to the present value of the estimated after-tax royalty savings generated over the life of the assets. Royalty rates were selected based on market review of third-party licensing arrangements. The fair value of the contingent consideration was valued based on a Monte-Carlo simulation of HGE's estimated future revenue and earnings before interest, taxes, depreciation and amortization, discounted to its present value.

The rate used to discount the estimated future net cash flows to their present values for each intangible asset was based upon a weighted average cost of capital calculation. The discount rate was determined after consideration of market rates of return on debt and equity capital, the weighted average return on invested capital and the risk associated with achieving forecasted sales related to the assets acquired from HGE.

The amortization period for each of the intangible assets is 10 years. The intangible assets are being amortized on a straight-line basis, which is consistent with the pattern that the economic benefits of the intangible assets are expected to be utilized based upon estimated cash flows generated from such assets. Goodwill associated with the acquisition was primarily attributable to the expansion opportunity of the remote monitoring platform for respiratory patients and providers. The goodwill is deductible for tax purposes.

The Company has included the financial results of HGE in the consolidated financial statements from the date of acquisition. The transaction costs associated with the acquisition were approximately $0.2 million and were recorded in general and administrative expense as incurred during 2020.

The following table summarizes changes to the contingent consideration payable, a recurring Level 3 measurement, for the year ended December 31, 2021:

Balance at December 31, 2020	$	13,187
Change in value of contingent consideration based on correction of purchase price calculation		(2,258)
Change in fair value of contingent consideration		(1,813)
Balance at December 31, 2021	$	9,116

Solus

On February 28, 2019, the Company completed the acquisition of all outstanding equity securities of Solus, whose principal assets included intangible assets related to customer agreements. The Company undertook the acquisition to accelerate its penetration in the United Kingdom market. The purchase price, net of cash acquired, of $2.0 million was funded with an initial cash payment of approximately $1.6 million and a settlement of a $0.4 million receivable from a preexisting relationship. Additionally, the Company recognized $1.0 million in contingent consideration as compensation expense during both 2020 and 2019. The acquisition has been accounted for as an acquisition of a business.

The following table summarizes the purchase price allocation that includes the fair values of the separately identifiable assets acquired and liabilities assumed as of February 28, 2019:

Cash	$	466
Accounts receivable		411
Inventory		492
Prepaids and other current assets		3
Property and equipment		1
Goodwill		592
Intangible assets		455
Total assets acquired		2,420
Accounts payable and accrued expenses		(241)
Contract liabilities		(75)
Deferred taxes		(78)
Total liabilities assumed		(394)
Total purchase price	$	2,026

The excess of purchase consideration over the fair value of net tangible and identifiable intangible assets acquired was recorded as goodwill. The fair values assigned to tangible and identifiable intangible assets acquired and liabilities assumed are based on management's estimates and assumptions as of the date of acquisition.

In determining the purchase price allocation, the Company considered, among other factors, the opportunity provided by a customer agreement with the U.K. National Health Service. The fair value of the intangible assets associated with this agreement were estimated using a discounted cash flow method with the application of the multi-period excess earnings method. Under this method, an intangible asset's fair value is equal to the present value of the incremental after-tax cash flows attributable to only the subject intangible assets after deducting contributory asset charges. An income and expenses forecast was built based upon specific intangible asset revenue and expense estimates.

The rate used to discount the estimated future net cash flows to their present values for each intangible asset was based upon a weighted average cost of capital calculation. The discount rate was determined after consideration of market rates of return on debt and equity capital, the weighted average return on invested capital and the risk associated with achieving forecasted sales related to the assets acquired from Solus.

The total weighted average amortization period for the intangible assets is approximately 3.83 years. The intangible assets are being amortized on a straight-line basis, which is consistent with the pattern that the economic benefits of the intangible assets are expected to be utilized based upon estimated cash flows generated from such assets. Goodwill associated with the acquisition was primarily attributable to the market expansion opportunity in the United Kingdom. The goodwill attributable to the United Kingdom jurisdiction is not deductible for tax purposes.

The Company has included the financial results of Solus in the consolidated financial statements from the date of acquisition. The transaction costs associated with the acquisition were approximately $0.2 million and were recorded in general and administrative expense as incurred during 2019.

4. Fair Value Measurements

In accordance with ASC 820, Fair Value Measurements and Disclosures, the Company generally defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The Company uses a three-tier fair value hierarchy, which classifies the inputs used in measuring fair values. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements), and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

- *Level 1* – inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.
- *Level 2* – inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability.
- *Level 3* – inputs are unobservable inputs for the asset or liability in which there is little, if any, market activity for the asset or liability at the measurement date.

As of December 31, 2021 and 2020, the Company had two items, cash equivalents and contingent consideration, measured at fair value on a recurring basis. The Company's cash equivalents primarily consist of money market deposits which total approximately $35.6 million and $90.3 million at December 31, 2021 and 2020, respectively, and are valued based on Level 1 of the fair value hierarchy. The Company's contingent consideration which totals $9.1 million and $13.2 million at December 31, 2021 and 2020, respectively, relates to the 2020 acquisition of HGE and is valued based on Level 3 of the fair value hierarchy as described in Note 3 "Business Combinations."

During 2019, the Company granted warrants to purchase 19,790 shares of common stock in connection with an amendment to its financing arrangement described in Note 10 "Debt". These equity-classified warrants were valued using the Black-Scholes pricing model, which falls within Level 3 of the fair value hierarchy.

The assumptions used in the Black-Scholes pricing model were as follows at the date of grant:

Expected dividend yield	0.0%
Risk free interest rate	2.4%
Expected stock price volatility	60.9%
Expected term (years)	10.0

5. Accounts Receivable

Accounts receivable consists of the following:

	December 31,	
	2021	2020
United States	$ 8,894	$ 18,893
International	2,147	4,967
Total accounts receivable	11,041	23,860
Less: Allowance for doubtful accounts	(132)	(372)
Accounts receivable, net of allowance for doubtful accounts	$ 10,909	$ 23,488

No individual customers accounted for 10% or more of revenue or accounts receivable as of or for the years ended December 31, 2021 or 2020.

6. Inventories

Inventories consist of the following:

	December 31,	
	2021	2020
Component parts	$ 19,860	$ 10,367
Finished goods	16,702	9,506
	$ 36,562	$ 19,873

7. Property and Equipment

Property and equipment are carried at cost less accumulated depreciation and amortization. A summary of the components of property and equipment is as follows:

	December 31,	
	2021	2020
Equipment	$ 1,576	$ 1,266
Furniture	1,387	1,320
Manufacturing equipment	14,318	10,658
Software	1,306	845
Demonstration, placements and evaluation units	19,109	16,116
Leasehold improvements	2,977	2,482
Construction in process	987	2,386
Total property and equipment	41,660	35,073
Less: Accumulated depreciation and amortization	(19,503)	(14,500)
Total property and equipment, net	$ 22,157	$ 20,573

Depreciation of property and equipment was $5.0 million, $4.6 million, and $3.0 million during the years ended December 31, 2021, 2020 and 2019, respectively.

8. Goodwill and Intangible Assets

The changes in the carrying amount of goodwill and intangible assets during 2020 and 2021 are as follows:

	Goodwill	Intangible Assets
Balance at December 31, 2019	$ 588	$ 353
Acquired during the period	15,620	5,520
Amortization	-	(183)
Foreign currency exchange rate changes	18	4
Balance at December 31, 2020	16,226	5,694
Acquired during the period	1,302	-
Change in value based on correction of purchase price calculation and allocation	(2,222)	(340)
Amortization	-	(633)
Impairment charge	-	(323)
Foreign currency exchange rate changes	(6)	-
Balance at December 31, 2021	$ 15,300	$ 4,398

The following table presents a summary of acquired intangible assets:

	As of December 31, 2021		
	Weighted Average Amortization Period in Years	Gross Carrying Amount	Accumulated Amortization
Customer relationships	10.00	$ 2,420	$ (272)
Developed technology	10.00	2,400	(271)
Customer agreements	3.83	456	(335)
Total intangible assets	9.47	$ 5,276	$ (878)

The Company recognized $0.4 million, $0.1 million and $0.1 million of amortization expense within sales and marketing expenses related to the intangible assets during the years ended December 31, 2021, 2020 and 2019, respectively. The Company also recognized $0.2 million and less than $0.1 million of amortization expense within general and administrative expenses related to intangible assets during the years ended December 31, 2021 and 2020, respectively, with no such amounts being recorded within general and administrative expenses during the year ended December 31, 2019.

The estimated amortization expense for intangible assets for future years is as follows:

2022	$ 603
2023	482
2024	482
2025	482
2026	482
Thereafter	1,867
Total	$ 4,398

9. Accrued Expenses and Other Current Liabilities and Other Long-Term Liabilities

Accrued expenses and other current liabilities consist of the following:

	December 31,	
	2021	2020
Accrued bonuses	$ 6,988	$ 6,584
Accrued commissions	5,181	11,689
Contingent consideration, current portion	3,952	5,322
Accrued payroll and employee-related costs	2,734	1,579
Operating lease liabilities, current portion	1,753	1,572
Accrued professional fees	1,682	1,156
Accrued taxes	1,450	1,717
Accrued inventory	1,111	1,423
Accrued vacation liability	786	793
Product warranty reserve	330	561
Other	2,592	1,637
Total accrued expenses and other current liabilities	$ 28,559	$ 34,033

Other long-term liabilities consist of the following:

	December 31,	
	2021	2020
Contingent consideration	$ 5,164	$ 7,865
Operating lease liabilities	5,357	6,779
Deferred payroll taxes	-	572
Other	-	13
Total other long-term liabilities	$ 10,521	$ 15,229

10. Debt

Credit Facilities

On October 21, 2020, the Company entered into a Loan and Security Agreement (the "CIBC Loan Agreement") with Canadian Imperial Bank of Commerce Innovation Banking ("CIBC") which provides for a revolving loan facility of $12.0 million (the "CIBC Revolving Facility") and a term loan facility of $40.0 million (the "CIBC Term Facility" and, together with the CIBC Revolving Facility, the "CIBC Facilities"). The proceeds of the CIBC Facilities were used to repay the Company's former revolving loan facility and term loan facility, described in more detail below.

The CIBC Revolving Facility was scheduled to mature on October 21, 2022 and could be renewed on an annual basis thereafter by mutual agreement of the Company and CIBC. The Revolving Facility bore interest at a floating rate per annum equal to the Wall Street Journal ("WSJ") Prime Rate plus 1.0% and is subject to a floor of 3.25%. At December 31, 2021, the interest rate was 4.25%. The outstanding balance under the CIBC Revolving Facility was $6.6 million at December 31, 2021 and there were letters of credit of $0.8 million outstanding at December 31, 2021. Availability under the CIBC Revolving Facility was determined based on eligible receivables reduced by letters of credit outstanding. At December 31, 2021, there were no additional borrowings available under the CIBC Revolving Facility.

The Term Facility was scheduled to mature on October 21, 2025. Advances under the Term Facility bore interest at a floating rate per annum equal to the WSJ Prime Rate plus 2.5% and is subject to a floor of 3.25%. At December 31, 2021, the interest rate was 5.75%. The outstanding balance was $40.0 million at December 31, 2021. The CIBC Loan Agreement provided for interest-only payments on the CIBC Term Facility for the first 36 months through October 21, 2023. Thereafter, amortization payments on the CIBC Term Facility were to be payable monthly in 24 equal installments. The CIBC Term Facility could not be prepaid prior to October 21, 2021 without prepaying all of the interest that otherwise would have been payable on the CIBC Term Facility during the period commencing on October 21, 2020 and ending on October 21, 2021, plus a prepayment charge of 2.0%. Thereafter, the CIBC Term Facility could be prepaid in full, subject to a prepayment charge of (i) 2.0%, if such prepayment occurred after October 21, 2021 but on or prior to October 21, 2022, and (ii) 1.0%, if such

prepayment occurred after October 21, 2022 but on or prior to October 21, 2023. The CIBC Facilities were secured by a lien on substantially all of the Company's assets, including intellectual property.

The CIBC Loan Agreement contained customary covenants and representations, including, without limitation, a minimum revenue covenant equal to 80% of each year's annual operating plan (tested on a trailing twelve month basis at the end of each fiscal quarter) and other financial covenants, reporting obligations, and limitations on dispositions, changes in business or ownership, mergers or acquisitions, indebtedness, encumbrances, distributions and investments, transactions with affiliates and capital expenditures.

The events of default under the Loan Agreement included, without limitation, and subject to customary grace periods, (1) the Company's failure to make any payments of principal or interest under the Loan Agreement or other loan documents, (2) the Company's breach or default in the performance of any covenant under the Loan Agreement, (3) the occurrence of a material adverse effect or an event that is reasonably likely to result in a material adverse effect, (4) the existence of an attachment or levy on a material portion of funds of the Company or its subsidiaries, (5) the Company's insolvency or bankruptcy, or (6) the occurrence of certain material defaults with respect to any other of the Company's indebtedness in excess of $500,000. If an event of default occurs, CIBC is entitled to take enforcement action, including acceleration of amounts due under the Loan Agreement. The CIBC Loan Agreement also contained other customary provisions, such as expense reimbursement and confidentiality. CIBC had indemnification rights and the right to assign the Facilities, subject to customary restrictions.

As of December 31, 2021, the Company was in compliance with all covenants under the Loan Agreement.

The annual principal maturities of the Company's CIBC Term Facility as of December 31, 2021 was as follows:

	Total Due
Years Ended December 31,	
2022	$ -
2023	3,200
2024	19,200
2025	17,600
Less: Unamortized deferred financing costs	(274)
Long-term loans payable	$ 39,726

As described in Note 20 "Subsequent Event", the Company refinanced the CIBC Facilities on February 18, 2022.

Prior Credit Facilities

On October 21, 2020, the Company used $40 million of the CIBC Term Facility, approximately $4.9 million of the CIBC Revolving Facility, and approximately $6.3 million of cash on hand to pay off all obligations owing under, and to terminate, both its prior Credit Agreement and Guaranty, as amended (the "Amended Credit Agreement and Guaranty"), with Perceptive Credit Holdings II, LP ("Perceptive") and its Business Financing Agreement, as amended (the "Amended Revolver Agreement") with Western Alliance Bank. As a result of the termination of the Amended Credit Agreement and Guaranty and the Amended Revolver Agreement, the Company recorded a loss on extinguishment of debt of $4.2 million, which included the prepayment penalty, exit fees, write-off of the remaining unamortized deferred financing costs, and legal fees, during the fourth quarter of 2020.

11. Commitments and Contingencies

Lease Commitments

In May 2016, the Company entered into a lease agreement for office and storage space at 100 Domain Drive, Exeter New Hampshire and has entered into several amendments since then to lease additional space. In total, the Company occupies approximately 95,320 square feet of space at this facility and the lease, as most recently amended, is scheduled to expire on January 28, 2025. The Company has the option to renew the lease for two additional five year terms by providing written notice twelve months prior to end of the initial or first lease extension term. The Company is not reasonably certain that it will renew the lease beyond January 2025.

In October 2019, the Company entered into an assignation and variation agreement for a lease of 453 square meters of office and warehouse space at 2 Dryden Loan, Bilston Glen Industrial Estate, Loanhead in the United Kingdom. The lease term, as amended, expires on February 15, 2027.

In November 2020, in connection with the acquisition of HGE, the Company assumed a real estate lease for 22,524 square feet of office space at 1301 Virginia Drive, Fort Washington, Pennsylvania. The lease term expires on July 31, 2025. The Company has the option to renew the lease for one additional five-year term by providing written notice six months prior to end of the current lease term. The Company is not reasonably certain that it will renew the lease beyond July 2025.

In November 2021, in connection with the acquisition of PCI, the Company assumed a real estate lease for 4,790 square feet of medical office space at 2832 and 2834 E. 101st Street, Tulsa, Oklahoma. The lease term expires on July 31, 2026. The Company has the option to renew the lease for two additional five year terms. The Company is not reasonably certain that it will renew the lease beyond July 2026.

In November 2021, the Company entered into a lease agreement, which is expected to commence in February 2022, where the Company will lease 23,877 square feet of manufacturing and warehouse space in Mesquite, Texas. The Company will lease this space under a lease expected to expire on March 31, 2027, with a renewal option for an additional five-year term. The Company is not reasonably certain that it will renew the lease beyond March 2027.

The following table presents operating lease cost and information related to operating right-of-use assets and operating lease liabilities:

	Year Ended December 31,	
	2021	2020
Lease cost:		
Operating lease cost	$ 2,461	$ 1,717
Variable lease cost	475	379
Total	$ 2,936	$ 2,096
Operating cash flow impacts:		
Cash paid for amounts included in measurement of lease liabilities	$ 2,460	$ 1,731
Operating right of use assets obtained in exchange for new operating lease liabilities	$ 549	$ 2,965
Weighted average remaining lease term - operating leases	3.3 years	4.2 years
Weighted average discount rate - operating leases	8.1%	8.0%

As of December 31, 2021, future maturities of lease liabilities under the Company's noncancelable operating leases are as follows:

	Total Due
Years Ended December 31,	
2022	$ 2,255
2023	2,523
2024	2,562
2025	662
2026	113
Thereafter	5
Total payments	8,120
Less interest	1,010
Total present value of lease payments	$ 7,110

Rent expense for the year ended December 31, 2019 was $2.0 million and was recorded in accordance with ASC 840.

Legal Matters

From time to time, the Company may become involved in various legal proceedings, including those that may arise in the ordinary course of business. The Company believes there is no litigation pending that could have, individually, or in the aggregate, a material adverse effect on the results of its operations or financial condition.

During 2019, the Company settled litigation with a former supplier. The parties reached a settlement agreement on December 16, 2019 whereby the supplier agreed to pay the Company $0.65 million in a series of monthly payments through December 2021, and both the Company and the supplier agreed to release each from any other outstanding claims, which included $0.5 million of accounts payable the Company had previously recorded. As a result, the Company recorded a gain of $1.2 million in the consolidated statement of comprehensive loss during the fourth quarter of 2019.

Other Commitments

The Company has non-cancellable purchase commitments for inventories, capital equipment and services which total $3.7 million at December 31, 2021, all of which are expected to be paid within one year.

12. Stockholders' Equity

Preferred Stock

As of December 31, 2021 and 2020, the Company has authorized 25,000,000 shares of preferred stock, at a par value of $0.001. As of December 31, 2021 and 2020, there are no shares of preferred stock outstanding.

Common Stock

As of December 31, 2021 and 2020, the Company has authorized 175,000,000 shares of common stock. The Company has 26,126,253 and 25,722,984 issued and outstanding shares of common stock as of December 31, 2021 and 2020, respectively, at a par value of $0.001. Each share of common stock is entitled to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when declared by the Board of Directors, subject to the prior rights of holders of all classes of stock outstanding.

13. Warrants

The table below sets forth the Company's warrant activity for the year ended December 31, 2020 and 2021:

	Number of Shares	Weighted Average Exercise Price
Outstanding at December 31, 2019	182,076	$ 14.84
Warrants granted	-	-
Warrants exercised	(148,128)	15.04
Outstanding at December 31, 2020	33,948	$ 14.00
Warrants granted	-	-
Warrants exercised	-	-
Outstanding at December 31, 2021	33,948	$ 14.00

All of the Company's warrants outstanding at December 31, 2021 have an exercise price of $14.00 and expire at periods ranging from March 14, 2022 through July 28, 2025.

On June 10, 2020, a warrant to purchase 80,097 shares of common stock was exercised on a net exercise basis. Upon exercise, the exercise price of $15.92 per share was satisfied through the Company's withholding of 39,031 of the warrant

shares and issuing 41,066 shares of common stock. On July 10, 2020, a warrant to purchase 20,889 shares of common stock held was exercised on a net exercise basis. Upon exercise, the exercise price of $14.00 per share was satisfied through the Company's withholding of 6,902 of the warrant shares and issuing 13,987 shares of common stock to the holder. On August 7, 2020, a warrant to purchase 4,285 shares of common stock held was exercised on a net exercise basis. Upon exercise, the exercise price of $14.00 per share was satisfied through the Company's withholding of 2,064 of the warrant shares and issuing 2,221 shares of common stock to the holder. On October 1, 2020, a warrant to purchase 42,857 shares of common stock held was exercised on a net exercise basis. Upon exercise, the exercise price of $14.00 per share was satisfied through the Company's withholding of 20,689 of the warrant shares and issuing 22,168 shares of common stock to the holder.

14. Disaggregated Revenue

The following table shows the Company's net revenue disaggregated into categories the Company considers meaningful:

	For the Year Ended December 31, 2021		
	US	International	Total
Net revenue by:			
Product Revenue			
Capital Equipment	$ 22,549	$ 11,117	$ 33,666
Disposables	50,764	15,867	66,631
Subtotal Product Revenue	73,313	26,984	100,297
Lease Revenue			
Capital Equipment	4,087	234	$ 4,321
Other	1,691	418	$ 2,109
Service and Other Revenue	5,056	1,509	6,565
Net Revenue	$ 84,147	$ 29,145	$ 113,292

	For the Year Ended December 31, 2020		
	US	International	Total
Net revenue by:			
Product Revenue			
Capital Equipment	$ 45,464	$ 12,719	$ 58,183
Disposables	44,548	12,163	56,711
Subtotal Product Revenue	90,012	24,882	114,894
Lease Revenue			
Capital Equipment	5,698	72	$ 5,770
Other	1,659	352	$ 2,011
Service and Other Revenue	1,792	1,266	3,058
Net Revenue	$ 99,161	$ 26,572	$ 125,733

	For the Year Ended December 31, 2019		
	US	International	Total
Net revenue by:			
Product Revenue			
Capital Equipment	$ 6,144	$ 3,180	$ 9,324
Disposables	27,753	7,302	35,055
Subtotal Product Revenue	33,897	10,482	44,379
Lease Revenue	1,721	-	1,721
Service and Other Revenue	965	1,039	2,004
Net Revenue	$ 36,583	$ 11,521	$ 48,104

United States and International net revenue is based on the customer location to which the product is shipped. No individual foreign country represents more than 10% of the Company's aggregated revenue.

Contract Balances from Contracts with Customers

Contract liabilities consist of deferred revenue and other contract liabilities associated with rebates and fees payable to GPOs, IDNs and distributor partners. Deferred revenues are included in contract liabilities in the accompanying consolidated balance sheets. The following table presents changes in contract liabilities during 2020 and 2021:

	Deferred Revenue	Other Contract Liabilities
Balance at December 31, 2019	$ 344	$ 137
Additions	3,137	459
Subtractions	(963)	(137)
Balance at December 31, 2020	$ 2,518	$ 459
Additions	7,430	369
Subtractions	(8,236)	(459)
Balance at December 31, 2021	$ 1,712	$ 369

15. Stock Plans and Stock-Based Compensation

On October 30, 2018, the Company's Board of Directors adopted, and stockholders approved, the Vapotherm, Inc. 2018 Equity Incentive Plan (as amended, the "2018 Equity Plan") which provides for the grant of stock options, stock appreciation rights, restricted and unrestricted stock and stock units, performance awards, and other awards that are convertible into or otherwise based on the Company's common stock. In April 2021, the Company's Board of Directors amended the 2018 Equity Plan to provide for double-trigger vesting in the event of a change in control (as defined in the 2018 Equity Plan).

On January 23, 2019, the Company established a French Qualifying Subplan, which allows for the granting of stock options to purchase shares of common stock for employees and officers who are residents of France, and on August 31, 2020, the Company established a French Qualifying Subplan, which allows for the granting of not only stock options to purchase shares of common stock but also restricted stock units for employees and officers who are residents of France, and superseded and replaced the prior subplan. The options and restricted stock unit awards under the French Qualifying Subplan reside under the umbrella of the 2018 Equity Plan.

Subject to customary anti-dilution adjustments, the number of shares of common stock that may be issued in satisfaction of awards under the 2018 Equity Plan was initially 998,900 shares, plus the number of shares (which will not exceed 769,419 shares) underlying awards under the Vapotherm, Inc. 2015 Stock Incentive Plan (the "2015 Equity Plan"), which plan was replaced by the 2018 Equity Plan, that, on or after the effectiveness of the 2018 Equity Plan, expire or are terminated, surrendered or cancelled without the delivery of shares, are forfeited to or repurchased by the Company, or otherwise become available again for grant under the 2015 Equity Plan. In addition, the number of shares of common stock available for issuance under the 2018 Equity Plan is increased on the first day of each calendar year beginning January 1, 2019 and each year thereafter until 2028 by the lesser of (i) four percent of the number of outstanding shares of common stock as of the close of business on the immediately preceding December 31 or (ii) the number of shares determined by the Board of Directors on or prior to such date. As of December 31, 2021, 1,239,402 shares of common stock remain available for issuance under the 2018 Equity Plan. To date, stock options, performance awards, restricted stock awards and restricted stock units have been issued under the 2018 Equity Plan.

Stock-based compensation expense was allocated based on the employees' and non-employees' functions as follows:

	Year Ended December 31,		
	2021	2020	2019
Cost of revenue	$ 729	$ 351	$ 187
Research and development	1,187	843	405
Sales and marketing	3,171	2,115	782
General and administrative	4,679	3,121	2,462
Total	$ 9,766	$ 6,430	$ 3,836

During the years ended December 31, 2021, 2020 and 2019, the Company granted 18,098, 19,387 and 17,644 shares of its common stock, respectively, to members of its Board of Directors and consultants under the 2018 Equity Plan that were valued at the closing price of the Company's common stock at the date of grant and were fully vested on the date of grant.

During the fourth quarter of 2021, the Company elected to modify certain outstanding option awards which resulted in the recognition of additional compensation expense of $0.1 million.

Stock Options

Under the terms of the 2018 Equity Plan, the exercise price of the options is determined by the Board of Directors at the time of grant. Options granted under the 2018 Equity Plan and prior plans, including the 2015 Equity Plan, vest ratably over a period of one to four years from the date of grant and are exercisable over a period of not more than ten years from the date of grant.

Stock option activity for the year ended December 31, 2021 is as follows:

	Number of Underlying Common Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2020	1,766,337	$ 12.15	8.32	$ 26,294
Options granted	466,390	26.30		
Options exercised	(168,289)	8.97		
Options canceled	(139,704)	17.68		
Outstanding at December 31, 2021	1,924,734	$ 15.46	7.82	$ 13,071
Exercisable at December 31, 2021	900,763	$ 11.40	7.13	$ 8,606
Vested and unvested expected to vest at December 31, 2021	1,924,734	$ 15.46	7.82	$ 13,071

The weighted average grant date fair value of options granted during the years ended December 31, 2021, 2020 and 2019 was $18.97, $9.90, and $9.20 per share, respectively. The aggregate intrinsic value of options exercised during the year ended December 31, 2021, 2020 and 2019 was $3.3 million, $6.8 million and $2.3 million, respectively. As of December 31, 2021, the Company had unrecognized stock-based compensation expense related to its unvested stock options awards of $10.2 million, which is expected to be recognized over the remaining weighted average vesting period of 2.7 years.

Certain members of the Company's management elected to receive their option grants in the form of restricted stock, which contains vesting provisions. Upon election of restricted stock, the Company records a liability for the unvested portion of the grant. As the restricted stock vests, the Company reclassifies the liability into additional paid-in capital. During the first quarter of 2019, the Company modified certain previously granted performance awards where the performance condition had not been met. The modification resulted in the granting of 68,526 shares of restricted stock for which 25% was immediately vested with the remaining portion vesting over 36 months.

During 2016, the Company permitted the exercise of 79,865 stock options via nonrecourse notes. There were no exercises of stock options via nonrecourse notes in 2019, 2020 or 2021. The nonrecourse notes were fully paid during 2019 and the related shares were issued.

The weighted average assumptions used in the Black-Scholes options pricing model are as follows:

	Year Ended December 31,		
	2021	2020	2019
Expected dividend yield	0.0%	0.0%	0.0%
Risk free interest rate	0.7%	1.6%	1.9%
Expected stock price volatility	86.6%	87.6%	64.5%
Expected term (years)	6.1	6.1	6.2

The Company assumed an average forfeiture rate of 4.17%, 4.17% and 6.73% for the years ended December 31, 2021, 2020 and 2019, respectively, based on historical experience with pre-vested forfeitures.

Restricted Stock Units and Restricted Stock Awards

The Company has granted both restricted stock units and restricted stock awards.

A summary of restricted stock unit activity for the year ended December 31, 2021 is as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested at December 31, 2020	228,489	$ 25.60
Granted	364,632	24.69
Vested	(45,908)	28.96
Canceled	(37,825)	25.03
Unvested at December 31, 2021	509,388	$ 24.69

A summary of restricted stock award activity for the year ended December 31, 2021 is as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested at December 31, 2020	103,650	$ 1.68
Granted/purchased	-	-
Vested	(95,661)	1.68
Canceled	-	-
Unvested at December 31, 2021	7,989	$ 1.68

As of December 31, 2021, the Company had unrecognized stock-based compensation expense related to its unvested restricted stock units and awards of $8.6 million, which is expected to be recognized over the remaining weighted average vesting period of 2.2 years.

Employee Stock Purchase Plan

Subject to customary anti-dilution adjustments, the number of shares of common stock that are available for issuance under the ESPP was initially 166,500 shares. The number of shares of common stock available for issuance under the ESPP is increased on the first day of each calendar year beginning January 1, 2019 and each year thereafter until 2028 by the lesser of (i) 1% of the number of shares of common stock issued and outstanding on the immediately preceding December 31, or (ii) the number of shares of common stock determined by the Board of Directors up to such an initial maximum of 1,741,300 shares of common stock. The number of shares of common stock reserved under the plan at December 31, 2021 totals 673,258.

The ESPP provides for successive discrete offering periods of approximately six months or as determined by the plan administrator. The first offering period began on January 2, 2020 and ended on May 14, 2020. Subsequent offering periods began on each November 15th and May 15th or the first trading day thereafter. During the fourth quarter of 2021, the plan administrator revised the six-month offering periods to begin on each January 1st and July 1st or the trading day thereafter. During the year ended December 31,2021, 75,313 shares of common stock were purchased by employees under the ESPP at an average price of $15.12 per share, resulting in cash proceeds of $1.1 million. During the year ended December 31, 2020, 58,140 shares of common stock were purchased by employees under the ESPP at an average price of $14.19 per share, resulting in cash proceeds of $0.8 million.

The ESPP permits eligible employees to elect to purchase shares of common stock through fixed whole percentage contributions from eligible compensation during each offering period, not to exceed 10% of the eligible compensation a participant receives during an offering period and not to accrue at a rate which exceeds $25,000 of the fair value of the stock (determined on the grant date(s)) for each calendar year. A participant may purchase the lower of (a) a number of shares of common stock determined by dividing such participant's accumulated payroll deductions on the exercise date by the option price, (b) 5,000 shares, or (c) such other lesser maximum number of shares as shall have been established by the plan administrator.

Amounts deducted and accumulated by the participant will be used to purchase shares of common stock at the end of each offering period. The purchase price of the shares will be 85% of the lower of the fair value of common stock on the first trading day of each offering period or on the purchase date. Participants may end their participation during an offering period up to ten days in advance of the exercise date and will be paid their accumulated contributions that have not been used to purchase shares of common stock. Participation ends automatically upon termination of employment.

The fair value of the purchase right for the ESPP option is estimated on the date of grant using the Black-Scholes pricing model with the following assumptions:

	Year Ended December 31,	
	2021	2020
Expected dividend yield	0.0%	0.0%
Risk free interest rate	0.2%	0.1% - 1.6%
Expected stock price volatility	55.0%	93.0% - 131.0%
Expected term (years)	0.5	0.4 - 0.5

16. Income Taxes

Net loss before income taxes is as follows:

	Year Ended December 31,		
	2021	2020	2019
United States	$ (59,973)	$ (51,591)	$ (50,343)
United Kingdom	73	89	(862)
Germany	24	-	-
	$ (59,876)	$ (51,502)	$ (51,205)

During the years ended December 31, 2021 and 2019, the Company recorded a tax benefit of approximately $0.1 million primarily related to foreign net deferred income tax assets deemed more likely than not to be realized in the United Kingdom. During the year ended December 31, 2020, the Company did not record any income tax expense or benefit because the Company has historically incurred operating losses and maintains a full valuation allowance against its United States net deferred tax assets. No tax benefit or provision was recorded on its United States results in any of the years ended December 31, 2021, 2020 or 2019. The reported amount of income tax benefit for each of 2021, 2020 and 2019 differs from the amount that would result from applying domestic federal statutory tax rates to pretax losses primarily because of changes in the valuation allowance and various permanent differences.

A reconciliation of income tax expense is computed as the statutory federal income tax rate to income taxes as reflected in the financial statement as follows:

	Year Ended December 31,		
	2021	2020	2019
Federal income tax benefit at statutory rate	(21.0%)	(21.0%)	(21.0%)
Permanent differences	(5.4%)	(5.9%)	(6.7)%
Change in valuation allowance	26.9%	26.8%	26.9%
Other	(0.6%)	0.1%	0.5%
Income tax expense	(0.1%)	0.0%	(0.3%)

Significant components of the Company's net deferred tax assets and liabilities are as follows:

	December 31,	
	2021	2020
Deferred Tax Assets		
Net operating loss carryforwards	$ 69,579	$ 59,779
Deduction of research and development costs	9,945	8,356
Tax credit carryforwards	6,068	5,109
Accrued expenses	4,425	2,997
Operating lease liabilities	1,771	2,300
Stock option expense attributed to non-ISO stock	3,473	1,641
Accrued bonus and vacation	2,065	1,693
Inventory valuation reserves	117	136
Deferred revenue	281	-
Accounts receivable allowance	105	100
Accrued warranty	89	151
Intangible assets	7	-
Other temporary differences	684	561
Gross deferred tax assets	98,609	82,823
Less: Valuation allowance	(95,309)	(79,236)
Deferred tax assets after valuation allowance	3,300	3,587
Deferred Tax Liabilities		
Depreciation	(1,468)	(1,220)
Intangible assets	-	(28)
Operating lease right of use assets	(1,754)	(2,300)
Deferred revenue	-	(45)
Gross deferred tax liabilities	(3,222)	(3,593)
Net Deferred Tax Assets (Liabilities)	$ 78	$ (6)

The Company's major tax jurisdictions are the states of New Hampshire and Pennsylvania, and the United States, United Kingdom, and Germany. As of December 31, 2021, the Company had federal and state net operating loss carryforwards of $293.3 million and $137.5 million, respectively, which begin to expire in 2022. Federal net operating loss carryforwards generated during or after the year ended December 31, 2018 will carryforward indefinitely. As of December 31, 2021, the Company had federal research and development tax credits carryforwards of $5.9 million which begin to expire in 2022.

Management of the Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets generated from its UK subsidiary, which are comprised principally of net operating loss carryforwards. Under the applicable accounting standards management has concluded that the Company will realize the benefit of the subsidiary's deferred tax asset.

Management of the Company has evaluated the positive and negative evidence bearing upon the realizability of its domestic deferred tax assets, which are comprised principally of net operating loss carryforwards and research and development credits. Under the applicable accounting standards, management has considered the Company's history of losses and concluded that it is more likely than not that the Company will not recognize the benefits of federal and state deferred tax assets. Accordingly, a valuation allowance of $95.3 million and $79.2 million has been established at December 31, 2021 and 2020, respectively. The valuation allowance increased $16.1 million during the year ended December 31, 2021, due primarily to net operating losses generated.

Years prior to 2018 are generally closed due to statute of limitations for purposes of taxing jurisdictions assessing additional tax; however, the tax attributes, including net operating losses and research credits, from such years can still be reviewed and reduced upon audit. Years beginning in 2018 remain open to examination for both federal and state purposes.

The Company accounts for uncertain tax positions pursuant to ASC 740, Income Taxes, which prescribes a recognition threshold and measurement process for financial statement recognition of uncertain tax positions taken or expected to be taken in a tax return. If the tax position meets this threshold, the benefit to be recognized is measured as the tax benefit having the highest likelihood of being realized upon ultimate settlement with the taxing authority. The Company recognizes interest accrued related to unrecognized tax benefits and penalties in the provision for income taxes. Management is not aware

of any uncertain tax positions. As of December 31, 2021, and 2020, the Company determined that there were no liabilities associated with uncertain tax positions and no related interest and penalties. The Company's policy is to recognize interest and penalties related to income tax matters as a component of income taxes, when and if incurred.

Utilization of the net operating loss and tax credit carryforwards may be subject to a substantial annual limitation under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the "Code") due to ownership change limitations that have occurred previously or that could occur in the future. These ownership changes may limit the amount of net operating loss and tax credit carryforwards that can be utilized to offset future taxable income and reduce taxes, respectively. The Company has not currently completed an evaluation of ownership changes through December 31, 2021 to assess whether utilization of the Company's net operating loss and tax credit carryforwards would be subject to an annual limitation under Sections 382 and 383 of the Code. To the extent an ownership change is determined to have occurred under Sections 382 and 383 of the Code, the net operating loss and tax credit carryforwards may be subject to limitation.

17. Net Loss Per Share

The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share for the periods indicated because including them would have had an anti-dilutive effect:

	Year Ended December 31,		
	2021	2020	2019
Options to purchase common stock	1,924,734	1,766,337	1,030,148
Unvested restricted stock units and awards	517,377	332,139	229,913
Employee stock purchase plan shares	-	43,595	-
Warrants to purchase common stock	33,948	33,948	182,076
	2,476,059	2,176,019	1,442,137

18. Related Party Transactions

The Company recorded sales of $1.2 million for the year ended December 31, 2021 to an entity in which a member of the Company's board of directors holds a management position. There were no outstanding balances due from that entity at December 31, 2021.

See Note 10 "Debt" for a discussion of the Company's Amended Credit Agreement and Guaranty and related transactions with Perceptive, a former holder of more than 5% of the Company's common stock.

19. Employee Benefit Plan

The Company has a 401(k) retirement plan (the "401(k) Plan") for the benefit of eligible employees, as defined. Each participant may elect to contribute up to 100% of his or her compensation to the 401(k) Plan each year, subject to certain Internal Revenue Service limitations. The Company matches employee contributions at a rate of 100% of the first 6% of employee contributions During 2019, the Company matched employee contributions at a rate of 50% of the first 4% of employee contributions, and the employer match was capped at $1,000 per year for employees with annual earnings less than $50,000 and $500 per year for employees with annual earnings greater than $50,000. In 2020 and 2021, the employer match was capped at $1,000 and $2,000 , respectively, per year for all employees. The Company contributed $0.6 million, $0.3 million and $0.1 million during the years ended December 31, 2021, 2020 and 2019, respectively.

20. Subsequent Event

On February 18, 2022 ("the Effective Date"), the Company entered into a Loan and Security Agreement (the "Loan Agreement") with SLR Investment Corporation ("SLR") which provides for a term loan A facility of $100.0 million (the "Term Loan A Facility") and a term loan B facility of $25.0 million (the "Term Loan B Facility" and, together with the Term Loan A Facility, the "Facilities"). The Term Loan A Facility was funded to the Company on the Effective Date. The Term Loan B Facility will be available to the Company following the Effective Date upon achievement of a certain minimum revenue level as more fully described in the Loan Agreement. The proceeds of Term Loan A Facility were used to repay all indebtedness under the CIBC Loan Agreement.

The Facilities will mature on February 1, 2027. Advances under the Facilities bear interest at a floating rate per annum equal to (a) the greater of (i) 0.10% and (ii) the LIBOR Rate, plus (b) 8.30%. The Loan Agreement provides for interest-only payments for the first forty-eight months following the Effective Date. Thereafter, amortization payments on the Facilities will be payable monthly in twenty-four equal installments; provided that the Company shall have the option to extend the interest-only period for an additional twelve months upon achievement of a certain minimum revenue level as more fully described in the Loan Agreement. The Facilities are secured by a lien on substantially all of the assets, including intellectual property, of the Company.

The Loan Agreement contains customary covenants and representations, including, without limitation, a minimum revenue covenant equal to 75% of each month's forecasted net product revenue (tested on a trailing six month basis at the end of each fiscal month, commencing with the six month period ending on July 31, 2022) and other financial covenants, reporting obligations, and limitations on dispositions, changes in business or ownership, mergers or acquisitions, indebtedness, encumbrances, distributions and investments, transactions with affiliates and capital expenditures.

The events of default under the Loan Agreement include, without limitation, and subject to customary grace periods, (1) the Company's failure to make any payments of principal or interest under the Loan Agreement or other loan documents, (2) the Company's breach or default in the performance of any covenant under the Loan Agreement, (3) the occurrence of a material adverse effect or an event that is reasonably likely to result in a material adverse effect, (4) the existence of an attachment or levy on a material portion of the Company's funds or of its subsidiaries, (5) the Company's insolvency or bankruptcy, or (6) the occurrence of certain material defaults with respect to any other of the Company's indebtedness in excess of $500,000. If an event of default occurs, SLR is entitled to take enforcement action, including acceleration of amounts due under the Loan Agreement.

The Loan Agreement also contains other customary provisions, such as expense reimbursement and confidentiality. SLR has indemnification rights and the right to assign the Facilities, subject to customary restrictions.

On February 18, 2022, the Company utilized approximately $47.4 million of the Term Loan A Facility to pay off all obligations owing under to pay off all obligations owing under, and to terminate the CIBC Facilities.

Exhibit 4.8

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN SECTIONS 5.3 AND 5.5 BELOW, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR IN FORM AND SUBSTANCE SATISFACTORY TO THE COMPANY, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

WARRANT TO PURCHASE STOCK

Company:	Vapotherm, Inc., a Delaware corporation
Type/Series of Stock:	Common Stock of the Company ("Common Stock")
Number of Shares:	16,875
Warrant Price:	$13.97 per share
Issue Date:	February 18, 2022
Expiration Date:	February 18, 2032 (See also Section 5.1(b))
Credit Facility:	This Warrant to Purchase Stock ("Warrant") is issued in connection with that certain Loan and Security Agreement, dated as of February 18, 2022 among SLR Investment Corp., a Maryland corporation with an office located at 500 Park Avenue, 3rd Floor, New York, NY ("SLR"), as collateral agent, the lenders party thereto from time to time including SCP Private Corporate Lending Fund SPV LLC in its capacity as a lender, the Company, HGE Health Care Solutions, LLC, a Delaware limited liability company, Vapotherm Access Care Management Network, LLC, a Delaware limited liability company, and Vapotherm Access Management Services, LLC, an Oklahoma limited liability company (as amended, restated, or otherwise modified from time to time, the "Loan Agreement").

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, SCP Private Corporate Lending Fund SPV LLC (together with any successor or permitted assignee or transferee of this Warrant or of any shares issued upon exercise hereof, "Holder") is entitled to purchase the number of fully paid and non-assessable shares (the "Shares") of the above-stated Type/Series of Stock (the "Class") of the above-named company (the "Company") at the above-stated Warrant Price, all as set forth above and as adjusted pursuant to SECTION 2 of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant.

SECTION 1 EXERCISE.

1.1 Method of Exercise.

(a) Holder may at any time and from time to time through the Expiration Date exercise this Warrant, in whole or in part, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 1.2, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

(b) Delivery of Shares Upon Exercise. As promptly as practicable after the Company receives the duly executed Notice of Exercise and payment of the Warrant Price for the exercised Shares in the manner set forth in Section 1.1 or 1.2 of this Warrant, as applicable, the Company shall deliver to Holder the Shares purchased hereunder upon such exercise.

1.2 Cashless Exercise. On any exercise of this Warrant, in lieu of payment of the aggregate Warrant Price in the manner as specified in Section 1.1 above, but otherwise in accordance with the requirements of Section 1.1, Holder may elect to receive Shares equal to the value of this Warrant, or portion hereof as to which this Warrant is being exercised in accordance with this Section 1.2 (a "Cashless Exercise"). Thereupon, the Company shall issue to the Holder such number of fully paid and non-assessable Shares, rounded down to the nearest whole number, as are computed using the following formula:

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

where:

X = the number of Shares to be issued to the Holder;

Y = the number of Shares with respect to which this Warrant is being exercised (inclusive of the Share surrendered to the Company in payment of the aggregate Warrant Price);

A = the Fair Market Value (as determined pursuant to Section 1.3 below) of one Share; and

B = the Warrant Price.

1.3 Fair Market Value. If the Common Stock is then traded or quoted on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market (a "Trading Market") and the Class is Common Stock, the fair market value of a Share shall be the closing price or last sale price of a share of Common Stock reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company. If the Common Stock is not traded in a Trading Market, the Board of Directors of the Company shall determine the fair market value of a Share in its reasonable good faith judgment.

1.4 Delivery of New Warrant. Promptly after Holder exercises this Warrant in the manner set forth in Sections 1.1 and/or 1.2 above, if this Warrant has not been fully exercised and has not expired, the Company shall deliver to Holder a new warrant of like tenor representing the Shares not so acquired.

1.5 Replacement of Warrant. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement and bond reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

1.6 Treatment of Warrant Upon Acquisition of Company.

(a) Acquisition. For the purpose of this Warrant, "Acquisition" means any transaction or series of related transactions involving: (i) the sale, lease, exclusive license or other disposition of all or substantially all of the assets of the Company; (ii) any merger or consolidation of the Company into or with another person or entity (other than a merger or consolidation effected exclusively to change the Company's domicile), or any other corporate reorganization, in which the stockholders of the Company in their capacity as such immediately prior to such merger, consolidation or reorganization, own less than a majority of the Company's (or the surviving or successor entity's) outstanding voting power immediately after such merger, consolidation or reorganization; or (iii) any sale or other transfer by the stockholders of the Company of shares representing at least a majority of the Company's then-total outstanding combined voting power. For the avoidance of any doubt, an Acquisition shall not include any transaction or series of transactions principally for bona fide equity financing purposes.

(b) Treatment of Warrant at Acquisition. In the event of an Acquisition in which the consideration to be received by the Company's stockholders consists solely of cash, solely of Marketable Securities or a combination of cash and Marketable Securities (a "Cash/Public Acquisition"), and the fair market value of one Share as determined in accordance with Section 1.3 above would be greater than the Warrant Price in effect on such date immediately prior to such Cash/Public Acquisition, and Holder has not exercised this Warrant pursuant to Section 1.1 above as to all Shares, then this Warrant shall automatically be deemed to be Cashless Exercised pursuant to Section 1.2 above as to all Shares effective immediately prior to and contingent upon the consummation of a Cash/Public Acquisition. In connection with such Cashless Exercise, Holder shall be deemed to have restated each of the representations and warranties in SECTION 4 of the Warrant as the date thereof, and the Company shall promptly notify the Holder of the amount of cash or number of securities issued upon exercise. In the event of a Cash/Public Acquisition where the fair market value of one Share as determined in accordance with Section 1.3 above would be less than the Warrant Price in effect immediately prior to such Cash/Public Acquisition, then this Warrant will expire without value or payment immediately prior to the consummation of such Cash/Public Acquisition and shall no longer be exercisable.

(c) Upon the closing of any Acquisition other than a Cash/Public Acquisition defined above, the acquiring, surviving or successor entity shall assume the obligations of this Warrant, and this Warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this Warrant.

(d) As used in this Warrant, "Marketable Securities" means securities meeting all of the following requirements: (i) the issuer thereof is then subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and is then current in its filing of all required reports and other information under the Securities Act of 1933, as amended (the "Act") and the Exchange Act; (ii) the class and series of shares or other security of the issuer that would be received by Holder in connection with the Acquisition were Holder to exercise this Warrant on or immediately following the closing thereof will be traded in a Trading Market; and (iii) Holder would be able to publicly re-sell, within six (6) months following the closing of such Acquisition, all of the issuer's shares and/or other securities that would be received by Holder in such Acquisition, except to the extent that any such restriction (x) arises solely under federal or state securities laws, rules or regulations, and (y) does not extend beyond six (6) months from the closing of such Acquisition.

SECTION 2 ADJUSTMENTS TO THE SHARES AND WARRANT PRICE.

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend or distribution on the outstanding shares of the Class payable in Common Stock or other securities or property (other than cash), then upon exercise of this Warrant, for each Share acquired, Holder shall receive, without additional cost to Holder, the total number and kind of securities and property which Holder would have received had Holder owned the Shares of record as of the date the dividend or distribution occurred. If the Company subdivides the outstanding shares of the Class by reclassification or otherwise into a greater number of shares, the number of Shares purchasable hereunder shall be proportionately increased and the Warrant Price shall be proportionately decreased, provided the aggregate purchase price shall remain the same. If the outstanding shares of the Class are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased and the number of Shares shall be proportionately decreased, provided the aggregate purchase price shall remain the same.

2.2 Reclassification, Exchange, Combinations or Substitution. Upon any event, other than an Acquisition, whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, this Warrant will be exercisable for the number, class and series of Company securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, provided the aggregate purchase price shall remain the same and subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, combinations, substitutions, replacements or other similar events.

2.3 No Fractional Share. No fractional Share shall be issuable upon exercise of this Warrant and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of the Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash the amount computed by multiplying the fractional interest by (a) the fair market value (as determined in accordance with Section 1.3 above) of a full Share, less (b) the then-effective Warrant Price.

2.4 Notice/Certificate as to Adjustments. Upon each adjustment of the Warrant Price, Class and/or number of Shares, the Company, at the Company's expense, shall notify Holder in writing within a reasonable time setting forth the adjustments to the Warrant Price, Class and/or number of Shares and facts upon which such adjustment is based. The Company shall, upon written request from Holder,

furnish Holder with a certificate of its Chief Executive Officer or Chief Financial Officer, including computations of such adjustment and the Warrant Price, Class and number of Shares in effect upon the date of such adjustment.

SECTION 3 REPRESENTATIONS AND COVENANTS OF THE COMPANY.

3.1 Representations and Warranties. The Company represents and warrants to, and agrees with, the Holder as follows:

(a) This Warrant is duly authorized and validly issued, and all shares which may be issued upon the exercise of this Warrant, and all securities, if any, issuable upon conversion of the Shares, shall, upon issuance, be duly authorized, validly issued, fully paid and non-assessable, and free of any taxes, liens, charges and encumbrances except for (i) such taxes or charges that the Company is not responsible for as provided for in Section 5.8 and (ii) restrictions on transfer provided for herein or under applicable federal and state securities laws. The Company covenants that it shall at all times cause to be reserved and kept available out of its authorized and unissued capital stock such number of shares of Common Stock and other securities as will be sufficient to permit the exercise in full of this Warrant and the conversion of the Shares into Common Stock or such other securities.

(b) The Company's capitalization as disclosed in its filings with the Commission is true and complete, in all material respects, as of the Issue Date.

(c) The Company has all requisite corporate power and authority, and has taken all requisite corporate action, to execute and deliver this Warrant, sell and issue the Shares and carry out and perform all of its obligations under this Warrant. If at any time the Company does not have a sufficient number of Shares authorized and available, then the Company shall take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock or other securities to such number of shares or other securities as shall be sufficient for such purposes. This Warrant constitutes the legal, valid and binding obligation of the Company, enforceable in accordance with its terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting the enforcement of creditors' rights generally and (ii) as limited by equitable principles generally, including any specific performance.

(d) No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state, or local governmental authority on the part of the Company is required in connection with the consummation of the transactions contemplated by this Warrant except for (i) the filing of a Form D with the Securities and Exchange Commission (the "Commission") under the Securities Act and compliance with the securities and blue sky laws in the states and other jurisdictions in which shares of Common Stock are offered and/or sold, which compliance will be effected in accordance with such laws, (ii) the approval by the New York Stock Exchange ("NYSE") of the listing of the Shares and (iii) the filing of one or more registration statements and all amendments thereto with the Commission.

(e) Neither the execution, delivery or performance of this Warrant by the Company nor the consummation of any of the transactions contemplated thereby (including, without limitation, the issuance and sale by the Company of the Shares) will conflict with, result in a breach or violation of, or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to, (i) the charter or by-laws of the Company, (ii) the terms of any indenture, contract, lease,

mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which the Company is a party or bound or to which its or their property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree applicable to the Company of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or any of its properties, except in the case of clauses (ii) and (iii) above, for any conflict, breach or violation of, or imposition that would not, individually or in the aggregate have (x) a material adverse effect on the validity or enforceability of this Warrant, (y) a material adverse effect on the condition (financial or otherwise), earnings, business or properties of the Company, or (z) a material adverse effect on the Company's ability to perform in any material respect its obligations under this Warrant (any of (x), (y) or (z)) (a "Material Adverse Effect").

(f) The Company is in compliance in all material respects with applicable NYSE continued listing requirements. To the Company's knowledge, there are no proceedings pending or threatened against the Company relating to the continued listing of the Shares on the NYSE and the Company has not received any notice of, nor to the Company's knowledge is there any reasonable basis for, the delisting of the Shares from the NYSE.

(g) The Company has not taken, directly or indirectly, any action designed to cause or result in, or that has constituted or that might reasonably be expected to constitute the stabilization or manipulation of the price of any securities of the Company in the fifteen days prior to the issuance of this Warrant.

3.2 Notice of Certain Events. If the Company proposes at any time to:

(a) declare any dividend or distribution upon the outstanding shares of the Class or Common Stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend;

(b) offer for subscription or sale pro rata to the holders of the outstanding shares of the Class any additional shares of any class or series of the Company's stock (other than pursuant to contractual pre-emptive rights);

(c) effect any reclassification, exchange, combination, substitution, reorganization or recapitalization of the outstanding shares of the Class; or

(d) effect an Acquisition or to liquidate, dissolve or wind up.

then, in connection with each such event, the Company shall give Holder:

(1) at least five (5) Business Days prior written notice of the date on which a record will be taken for such dividend, distribution, or subscription rights (and specifying the date on which the holders of outstanding shares of the Class will be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (a) and (b) above; and

(2) in the case of the matters referred to in (c) and (d) above at least five (5) Business Days prior written notice of the estimated date when the same will take place (and specifying the date on which the holders of outstanding shares of the Class will be entitled

to exchange their shares for the securities or other property deliverable upon the occurrence of such event).

The Company will also provide information requested by Holder that is reasonably necessary to enable Holder to comply with Holder's accounting or reporting requirements.

SECTION 4 REPRESENTATIONS AND WARRANTIES OF THE HOLDER.

The Holder represents and warrants to the Company as follows:

4.1 Purchase for Own Account. This Warrant and the securities to be acquired upon exercise of this Warrant by Holder are being acquired for investment for Holder's account, not as a nominee or agent, and not with a view to the public resale or distribution within the meaning of the Act, and the Holder has no present intention of selling or engaging in any public distribution of the same except pursuant to a registration or exemption. Holder also represents that it has not been formed for the specific purpose of acquiring this Warrant or the Shares.

4.2 Disclosure of Information. Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and its underlying securities. Holder further has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of this Warrant and its underlying securities and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.3 Investment Experience. Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.4 Accredited Investor Status. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

4.5 The Act. Holder understands that this Warrant and the Shares issuable upon exercise hereof have not been registered under the Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the Holder's investment intent as expressed herein. Holder understands that this Warrant and the Shares issued upon any exercise hereof must be held indefinitely unless subsequently registered under the Act and qualified under applicable state securities laws, or unless exemption from such registration and qualification are otherwise available. Holder is aware of the provisions of Rule 144 promulgated under the Act.

4.6 No Voting Rights; No Stockholder Rights. Holder, as a Holder of this Warrant, will not have any voting rights or otherwise be entitled to any other rights afforded to a stockholder of the

Company, except such rights as are expressly granted herein such as notice and other rights, until the exercise of this Warrant.

4.7 No Short Sales. Holder has not at any time on or prior to the Issue Date engaged in any short sales or equivalent transactions in the Common Stock. Holder agrees that at all times from and after the Issue Date and on or before the expiration or earlier termination of this Warrant, it shall not engage in any short sales or equivalent transactions in the Common Stock.

SECTION 5 MISCELLANEOUS.

5.1 Expiration.

(a) Term and Automatic Conversion Upon Expiration. Subject to the provisions of Section 1.6 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 P.M. Pacific time, on the Expiration Date and shall be void thereafter.

(b) Automatic Cashless Exercise upon Expiration. In the event that, upon the Expiration Date, the fair market value of one Share (or other security issuable upon the exercise hereof) as determined in accordance with Section 1.3 above is greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares (or such other securities) for which it shall not previously have been exercised, and the Company shall, within a reasonable time, deliver a certificate representing the Shares (or such other securities) issued upon such exercise to Holder.

5.2 Legends. The Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted with a legend in substantially the following form:

THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO SCP PRIVATE CORPORATE LENDING FUND SPV LLC DATED FEBRUARY 18, 2022, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issuable upon exercise of this Warrant may not be transferred or assigned in whole or in part except in compliance with applicable federal and state securities laws by the transferor and the transferee (including, without limitation, the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, as reasonably requested by the Company). Upon any assignment of the Warrant (other than to an affiliate of the Holder), the Holder and assignee shall complete an assignment in the form attached hereto as Appendix 2.

5.4 No Impairment; Further Assurances. The Company will not, by amendment of its charter or through any reorganization, transfer of assets, consolidation, merger or dissolution, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed by it hereunder, but will at all times in good faith assist in the carrying out of all the provisions of this Warrant and in the taking of all such action as may reasonably be requested by Holder

in order to protect the exercise privilege of Holder against dilution or other impairment, consistent with the tenor and purpose of this Warrant. The Company will not increase the par value of any Shares above the Warrant Price then in effect, and will take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable Shares upon the exercise of this Warrant.

5.5 Transfer Procedure. Subject to the provisions of Section 5.3 and upon providing the Company with written notice, Holder may transfer all or part of this Warrant or the Shares issuable upon exercise of this Warrant (or the securities issuable directly or indirectly, upon conversion of the Shares, if any) to any transferee, provided, however, in connection with any such transfer, Holder will give the Company notice of the portion of the Warrant being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable); and provided further, that any subsequent transferee shall be deemed to make to the Company each of the representations and warranties set forth in SECTION 4 as of the date of such transfer and be bound by all of the terms and conditions of this Warrant.

5.6 [Reserved].

5.7 Binding on Successors. This Warrant will be binding upon any entity succeeding to the Company by merger, consolidation or acquisition of all or substantially all of the Company's assets.

5.8 Taxes. The Company will pay all taxes (other than taxes based upon income) and other governmental charges that may be imposed with respect to the issuance or delivery of the Shares, other than any tax or other charge imposed in connection with any transfer involved in the issue and delivery of the Shares in a name other than that of the Holder.

5.9 Notices. All notices and other communications hereunder from the Company to the Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3rd) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by facsimile or electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 5.9. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

SCP PRIVATE CORPORATE LENDING FUND SPV LLC
c/o SLR Investment Corp.
500 Park Avenue, 3rd Floor
New York, NY 10022
Attention: Anthony Storino
Fax: (212) 993-1698
Email: astorino@slrcp.com

With a copy (which shall not constitute notice) to:

LATHAM & WATKINS LLP
505 Montgomery Street, Suite 2000
San Francisco, CA 94111
Attention: Haim Zaltzman
Facsimile: (415) 395-8095
Email: haim.zaltzman@lw.com

Notice to the Company shall be addressed as follows until Holder receives notice of a change in address:

VAPOTHERM, INC.
100 Domain Drive
Exeter, NH 03833
Attn: John Landry, VP & CFO
Fax: (603) 658-0181
Email: jlandry@vtherm.com

5.10 Waiver. This Warrant and any term hereof may be changed, waived, discharged or terminated (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

5.11 Counterparts; Facsimile/Electronic Signatures. This Warrant may be executed in counterparts, all of which together shall constitute one and the same agreement. Any signature page delivered electronically or by facsimile shall be binding to the same extent as an original signature page with regards to any agreement subject to the terms hereof or any amendment thereto.

5.12 Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflict of law principles that would result in the application of any other than the laws of the State of New York.

5.13 Waiver of Jury Trial. **AS A MATERIAL INDUCEMENT FOR EACH PARTY HERETO TO ENTER INTO THIS WARRANT, THE PARTIES HERETO HEREBY WAIVE ANY RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING RELATED IN ANY WAY TO THIS WARRANT AND/OR ANY AND ALL OF THE OTHER DOCUMENTS ASSOCIATED WITH THIS TRANSACTION**.

5.14 Headings. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant.

5.15 Business Days. "Business Day" is any day that is not a Saturday, Sunday or a day on which banks in the State of New York are closed.

[*Signature page follows*]

IN WITNESS WHEREOF, the parties have caused this Warrant to Purchase Stock to be executed by their duly authorized representatives effective as of the Issue Date written above.

"COMPANY"

VAPOTHERM, INC.

By: _____

Name: John Landry

Title: Senior Vice President and Chief Financial Officer

"HOLDER"

SCP PRIVATE CORPORATE LENDING FUND SPV LLC

By: _____

Name: Anthony Storino

Title: Authorized Signatory

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned Holder hereby exercises its right purchase _____ shares of the Common Stock of Vapotherm, Inc. (the "Company") in accordance with the attached Warrant to Purchase Stock, and tenders payment of the aggregate Warrant Price for such shares as follows:

[ ] check in the amount of $_____ payable to order of the Company enclosed herewith

[ ] Wire transfer of immediately available funds to the Company's account

[ ] Cashless Exercise pursuant to Section 1.2 of the Warrant

[ ] Other [Describe] _____

2. Please issue a certificate or certificates representing the Shares in the name specified below:

_____
Holder's Name

_____

_____
(Address)

3. By its execution below and for the benefit of the Company, Holder hereby restates each of the representations and warranties in SECTION 4 of the Warrant to Purchase Stock as of the date hereof.

HOLDER:

_____

By: _____

Name: _____

Title: _____

(Date): _____

APPENDIX 2

ASSIGNMENT

For value received, SCP Private Corporate Lending Fund SPV LLC hereby sells, assigns and transfers unto

Name:

Address:

Tax ID:

that certain Warrant to Purchase Stock issued by Vapotherm, Inc. (the "Company" on February 18, 2022 (the "Warrant") together with all rights, title and interest therein.

SCP PRIVATE CORPORATE LENDING FUND SPV LLC

By: _____

Name: _____

Title: _____

Date: _____

By its execution below, and for the benefit of the Company, [SLR TRANSFEREE] makes each of the representations and warranties set forth in Article 4 of the Warrant and agrees to all other provisions of the Warrant as of the date hereof.

[SLR TRANSFEREE]

By: _____

Name: _____

Title: _____

Date: _____

Exhibit 4.9

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

Vapotherm, Inc. (the "Company") has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): common stock, $0.001 par value per share ("Common Stock").

Description of Capital Stock

The following description of the Company's capital stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to the Company's Tenth Amended and Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation"), and Amended and Restated Bylaws (the "Bylaws"), each of which is incorporated by reference as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021. The Company encourages you to read the Certificate of Incorporation, the Bylaws and the applicable provisions of the Delaware General Corporation Law ("DGCL") for additional information.

Authorized Capital Shares

The Certificate of Incorporation authorizes the issuance of 200,000,000 shares of capital stock, consisting of 175,000,000 shares of Common Stock and 25,000,000 shares of preferred stock, $0.001 par value per share ("Preferred Stock").

Voting Rights

Holders of the Company's Common Stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. All matters other than the election of directors shall be determined by a majority of the votes cast on the matter affirmatively or negatively. A nominee for director shall be elected to the Company's board of directors (the "Board") if the votes properly cast for such nominee's election exceed the votes properly cast against such nominee's election; provided, however, that directors shall be elected by a plurality of the votes properly cast at any meeting of stockholders at which there is a contested election of directors.

Dividend Rights

Subject to applicable law and any preferential dividend rights of any series of Preferred Stock that the Company may designate and issue in the future, holders of Common Stock are entitled to share ratably in all dividends payable in cash, stock or otherwise as may be declared by the Board and paid from funds lawfully available therefor.

Liquidation Rights

In the event of the Company's dissolution, liquidation or winding up, whether voluntary or involuntary, the holders of Common Stock are entitled to receive proportionately the Company's net assets available for distribution to its stockholders after the payment or provision for payment of all debts and other liabilities and subject to the preferential and other amounts, if any, to which the holders of any series of Preferred Stock that the Company may designate and issue in the future may be entitled.

Other Rights and Preferences

The Common Stock has no redemption provisions or preemptive, conversion or exchange rights. No shares of any class of the Company's capital stock are subject to any sinking fund provisions, restrictions on the alienability of securities to be registered, calls, assessments by or liabilities of the Company. The Certificate of Incorporation and Bylaws do not restrict the ability of a holder of Common Stock to transfer his, her or its shares of Common Stock. All currently outstanding shares of Common Stock are fully paid and non-assessable.

Transfer Agent and Registrar

The transfer agent and registrar for the Company's Common Stock is American Stock Transfer & Trust Company, LLC.

Listing

The Company's Common Stock is listed on the New York Stock Exchange (the "NYSE") under the symbol "VAPO."

Certain Provisions of the Certificate of Incorporation, Bylaws and the DGCL

Certain provisions of the Certificate of Incorporation, Bylaws and the DGCL may be deemed to have an anti-takeover effect and may delay, defer or prevent a change in control of the Company.

Anti-Takeover Effects of the Certificate of Incorporation and Bylaws

The Company's Certificate of Incorporation and Bylaws contain certain provisions that are intended to enhance the likelihood of continuity and stability in the composition of the Board but which may have the effect of delaying, deferring or preventing a future takeover or change in control of the Company unless such takeover or change in control is approved by the Board.

These provisions include:

Authorized but unissued shares. The Company's authorized but unissued shares of Common Stock and Preferred Stock are available for future issuance without stockholder approval except as otherwise provided by the DGCL and the NYSE listing standards. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of Common Stock and Preferred Stock could render more difficult or discourage an attempt to obtain control of a majority of the Company's Common Stock by means of a proxy contest, tender offer, merger or otherwise. The Board is authorized to issue Preferred Stock in one or more series, from time to time, and, with respect to each such series, to fix the number of shares in each such series, the voting powers, and such designations, preferences and relative, participating, optional or other rights, and the qualifications, limitations or restrictions thereof. This may enable the Board to issue shares to persons friendly to current management or to issue Preferred Stock with terms that could render more difficult or discourage a third-party attempt to obtain control of the Company by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of the Company's management.

Classified Board. The Company's Certificate of Incorporation provides that the Board be divided into three classes of directors, with the classes as nearly equal in number as possible. As a result, approximately one-third of the Board will be elected each year. The classification of directors has the

effect of making it more difficult for stockholders to change the composition of the Board. The Certificate of Incorporation also provides that, subject to any rights of holders of any series of Preferred Stock to elect directors, the number of directors will be fixed exclusively pursuant to a resolution adopted by the Board.

Vacancies. Vacancies and newly created directorships shall be filled exclusively by vote of a majority of the directors then in office, even if less than a quorum, or by a sole remaining director, except that any vacancy created by the removal of a director by the stockholders for cause shall only be filled, in addition to any other vote otherwise required by law, by a vote of a majority of the outstanding shares of Common Stock.

Removal of directors. Subject to the rights of the holders of any series of Preferred Stock to elect directors, the Certificate of Incorporation provides that the directors of the Company may be removed only for cause by the affirmative vote of the holders of at least 75% of the voting power of the outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose. This requirement of a supermajority vote to remove directors could enable a minority of the Company's stockholders to prevent a change in the composition of the Board.

Action by written consent. Except as otherwise provided for or fixed with respect to any series of Preferred Stock, the Certificate of Incorporation provides that stockholder action can be taken only at an annual or special meeting of stockholders and cannot be taken by written consent in lieu of a meeting.

Special meetings of stockholders. Subject to the rights of the holders of any series of Preferred Stock, and to the requirements of applicable law, the Certificate of Incorporation provides that special meetings of the stockholders can only be called pursuant to a written resolution adopted by a majority of the Board. Stockholders are not permitted to call a special meeting or to require the Board to call a special meeting.

Advance notice procedures. The Bylaws have advance notice procedures for stockholder proposals to be brought before an annual meeting of its stockholders, including proposed nominations of persons for election to the Board. Stockholders at an annual meeting are only be able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the Board or by a stockholder of record who was a stockholder of record at the time of the giving of the notice, is entitled to vote at the meeting and who has given the Company's Secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although the Bylaws do not give the Company's Board the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the Bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the Company.

Supermajority approval requirements. The affirmative vote of holders of at least 75% of the voting power of the outstanding shares of capital stock of the Company entitled to vote with respect thereto, voting together as a single class, is required to make, alter, amend or repeal the Bylaws. This requirement of a supermajority vote to approve amendments to the Bylaws could enable a minority of its stockholders to exercise veto power over any such amendments. The affirmative vote of the holders of at least 75% of the voting power of the outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for such purpose, is required to amend certain provisions of the Certificate of Incorporation,

including provisions related to capitalization, the Board, limitation of director liability, no action by written consent, special meetings of stockholders, and amendments to the Bylaws and the Certificate of Incorporation. This requirement of a supermajority vote to approve amendments to these provisions could enable a minority of its stockholders to exercise veto power over any such amendments.

Exclusive forum. The Company's Certificate of Incorporation requires, to the fullest extent permitted by law, that (i) any derivative action or proceeding brought on behalf of the Company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or the Company's stockholders, (iii) any action asserting a claim against the Company arising pursuant to any provision of the DGCL, the Certificate of Incorporation or the Bylaws, (iv) any action to interpret, apply, enforce or determine the validity of the Certificate of Incorporation or the Bylaws or (v) any action asserting a claim against the Company governed by the internal affairs doctrine be brought only in specified courts in the State of Delaware. The Company's Certificate of Incorporation additionally requires that actions arising under the Securities Act of 1933, as amended, be brought only in the federal district courts of the United States of America. Because Section 27 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder, this provision does not apply to claims made under the Exchange Act. Although the Company believes these provisions beneficially provide increased consistency in the application of relevant law in the types of lawsuits to which it applies, such provision may have the effect of discouraging lawsuits against the Company's directors and officers.

Section 203 of the DGCL

The Company is subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's voting stock.

Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions: before the stockholder became interested, the corporation's board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder; upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding, for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers and employee stock plans, in some instances; or at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders' amendment approved by at least a majority of the outstanding voting shares. The Company has not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of the Company may be discouraged or prevented.

Exhibit 10.7

FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT

This First Amendment to Loan and Security Agreement (this "**Amendment**") is entered as of December 1, 2021, by and among CANADIAN IMPERIAL BANK OF COMMERCE ("**Bank**") and VAPOTHERM, INC., a Delaware corporation ("**Borrower Representative**"), HGE HEALTH CARE SOLUTIONS, LLC, a Delaware limited liability company ("**HGE**", and together with Borrower Representative and each Person party to the Loan Agreement (as defined below) as a borrower from time to time, collectively, "**Borrowers**", and each, a "**Borrower**").

RECITALS

A. Borrower Representative and Bank are parties to that certain Loan and Security Agreement, dated as of October 21, 2020 (as amended, restated, supplemented or otherwise modified, the "**Loan Agreement**").

B. HGE entered into that certain Joinder to Loan and Security Agreement, dated as of December 7, 2020, pursuant to which it became a Borrower.

C. The parties desire to modify the terms of the Loan Agreement as set forth in this Amendment, subject to the terms and conditions hereof.

AGREEMENTS

1. **Defined Terms**. Capitalized terms used but not defined in this Amendment shall have the meanings set forth in the Loan Agreement.

2. **Amendments**.

2.1 A new clause (g) is hereby added to Section 5.2, of the Agreement, to read as follows:

(g) For each item of Inventory included as Eligible Inventory in any Borrowing Base Report, such item of Inventory conforms to the requirements set forth in the defined term "Eligible Inventory". Such Inventory has been manufactured in accordance with all Requirements of Law and meets all applicable governmental standards.

2.2 The following defined terms in Exhibit A are hereby amended and restated or added in appropriate alphabetical order, as applicable:

"**Borrowing Base**" means, as of any date of determination, the sum of (i) 85.0% of the aggregate amount of Eligible Accounts, and (ii) the lesser of (A) 25.0% of the aggregate amount of Eligible Inventory, valued at the lower of cost or market on a first-in, first-out basis, and (B) $4,000,000, in each case, as of the most recent date a Borrowing Base Report is required to be delivered hereunder, as determined by Bank from such most recent Borrowing Base Report, provided that Bank may reduce the Borrowing Base, in its good faith business judgment to mitigate the impact of events, conditions, contingencies or risks which may adversely affect the Collateral.

"**Eligible Inventory**" means, at any time, the aggregate of Borrowers' Inventory that (a) consists of finished goods, in good, new, and salable condition, which is not perishable, returned, consigned, obsolete, not sellable, damaged, or defective, and is not comprised of demonstrative or custom inventory, works in progress, packaging or shipping materials, or supplies; (b) meets all applicable governmental standards; (c) has been manufactured in compliance with the Fair Labor Standards Act; (d) is subject to the first priority Liens granted in favor of Bank and is not subject to any other Lien other than Permitted Liens; (e) is located in the United States at a location is subject to a Collateral Access Agreement; and (f) is otherwise acceptable to Bank in its good faith business judgment.

2.3 Exhibit D-2 is hereby amended and restated as set forth on Exhibit D-2 hereto.

3. **Reaffirmation of Obligations**.

3.1 Each Borrower hereby acknowledges that the Obligations due and owing to Bank are without setoff, recoupment, defense or counterclaim, in law or in equity, of any nature or kind. All security interests granted to Bank by each Borrower under any Loan Document are hereby reaffirmed by such Borrower and the security interests previously granted shall continue to secure the Obligations without novation from the date of original grant. The terms of the Loan Documents remain in full force and effect. The foregoing modification does not constitute a waiver of any Event of Default and shall not obligate Bank to modify any other term or waive compliance with any covenant in the Loan Documents. Bank's agreement to the modifications as set forth herein shall not establish a course of dealing between the parties with respect to any future requested modification.

4. **Representations**. To induce Bank to enter into this Amendment, each Borrower hereby represents and warrants as follows:

4.1 The representations and warranties contained in the Agreement and the other Loan Documents are true and correct in all material respects as of the date of this Amendment (except for such representations and warranties referring to another date, which representations and warranties are true and correct in all material respects as of such date).

4.2 No Event of Default has occurred or presently exists.

4.3 Such Borrower has the power and authority to execute and deliver this Amendment and to perform its obligations under the Agreement, as amended by this Amendment.

4.4 The execution and delivery by such Borrower of this Amendment and the performance by such Borrower of its obligations under the Agreement (a) have been duly authorized by all necessary action on the part of such Borrower, and (b) will not contravene (i) any law or regulation binding on or affecting such Borrower, (ii) any contractual restriction with a Person binding on such Borrower, (iii) any order, judgment or decree of any court or other governmental or public body or authority, or subdivision thereof, binding on such Borrower, or (iv) the Operating Documents of such Borrower.

4.5 The execution and delivery by such Borrower of this Amendment and the performance by such Borrower of its obligations under the Agreement, as amended by this Amendment, do not require any order, consent, approval, license, authorization or validation of, or filing, recording or registration with, or exemption by, any governmental or public body or authority, or subdivision thereof, binding on such Borrower, except as already has been obtained or made.

5. **Counterparts; Electronic Execution of Documents**. This Amendment may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement. Delivery of an executed counterpart of a signature page of this Amendment or any document delivered in connection therewith by electronic means including by email delivery of a ".pdf" format data file shall be effective as delivery of an original executed counterpart thereof.

6. **Effectiveness**. This Amendment shall be effective upon

6.1 due execution and delivery of this Amendment by the parties hereto;

6.2 an updated Perfection Certificate; and

6.3 payment of an amendment fee of $5,000 and all Bank Expenses incurred in connection with this Amendment as of the date hereof;

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

[SIGNATURE PAGE TO FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed as of the date set forth above.

BORROWERS:

VAPOTHERM, INC.

By: /s/ John Landry
Name: John Landry
Title: Senior Vice President and Chief Financial Officer

HGE HEALTH CARE SOLUTIONS, LLC,

By: /s/ John Landry
Name: John Landry
Title: Manager

BANK:

CANADIAN IMPERIA BANK OF COMMERCE

By: /s/ Jeff Chapman
Name: Jeff Chapman
Title: Assistant General Manager

By: /s/ Corey Perlmutter
Name: Corey Perlmutter
Title: Assistant General Manager

EXHIBIT D-2

BORROWING BASE REPORT

Reference is made to that certain Loan and Security Agreement, dated October 21, 2020 (as amended, restated, supplemented or otherwise modified, from time to time, the "**Agreement**"), among CANADIAN IMPERIAL BANK OF COMMERCE ("**Bank**"), VAPOTHERM, INC., a Delaware corporation ("**Borrower Representative**", and together with each other Person party thereto as a borrower from time to time, collectively, "**Borrowers**", and each, a "**Borrower**"). Capitalized terms have meanings as defined in the Agreement.

The undersigned authorized officer of Borrower Representative, hereby certifies in accordance with the terms of the Agreement that the attached calculation of the Availability Amount as of the date of this Borrowing Base Report is true and correct.

Report Date: _____

(A)	AGGREGATE ACCOUNS	$
(B)	AGGREGATE AMOUNT OF INELIGIBLE ACCOUNTS – *sum of below ineligible Accounts, without duplication*	$
	Aged Past 90 Days – Accounts not paid within 90 days of invoice date (regardless of invoice payment period terms)	$
	Cross-Aged Past 90 Days – Accounts owing from an Account Debtor if 50% or more of the Accounts owing from such Account Debtor have not been paid within 90 days of invoice date	$
	Concentration – Accounts owing from an Account Debtor, whose total obligations to Borrowers exceed 25.0% of all Accounts, to the extent of such excess	$
	Affiliate – Accounts for which the Account Debtor is a Borrower's Affiliate	$
	Government – Accounts owing from an Account Debtor which is a Governmental Authority;	$
	Contra Accounts – Accounts owing from an Account Debtor to the extent that Borrower is indebted or obligated in any manner to the Account Debtor (as creditor, lessor, supplier or otherwise), in each case, to the extent of such obligation	$
	Foreign Account Debtors / Foreign Billed / Foreign Currency – Accounts (i) owing from an Account Debtor (A) which does not have its principal place of business in the United States or Canada or (B) whose billing address (as set forth in the applicable invoice for such Account) is not in the United States or Canada, or (ii) billed from and/or payable to a Borrower outside of the United States, or (iii) billed and/or payable in a Currency other than US Dollars or Canadian Dollars	$
	No Perfected Security Interest – Accounts in which Bank does not have a first priority, perfected security interest under all applicable laws;	$
	Accrual of Allowances / Rebates / Credits – Accounts with or in respect of accruals for marketing allowances, incentive rebates, price protection, cooperative advertising and other similar marketing credits	$
	Disputed Accounts – Accounts in which the Account Debtor disputes liability or makes any claim (to the extent of the disputed or claimed amount)	$
	Insolvent Account Debtor – Accounts in which Account Debtor is subject to an Insolvency Proceeding or becomes insolvent, or goes out of business	$
	Upfront Payments / Deposits – Accounts with customer deposits and/or with respect to which Borrower has received an upfront payment, to the extent of such customer deposit and/or upfront payment	$
	Consignment, Etc. – Accounts for demonstration or promotional equipment, or in which goods are consigned, or sold on a "sale guaranteed", "sale or return", "sale on approval", or other similar terms	$
	No Performance – Accounts owing from an Account Debtor where goods have not yet been shipped to the Account Debtor or services have not yet been rendered to the Account Debtor	$

	Withholding / Contingency – Accounts owing from an Account Debtor the amount of which may be subject to withholding or are contingent pending complete performance, completion or fulfillment requirements (to the extent of the amount subject to withholding or contingency)	$	
	Trust / Bonded – Accounts subject to trust provisions, subrogation rights of a bonding company, or a statutory trust;	$	
	Not Invoiced – Accounts for which the Account Debtor has not been invoiced	$	
	Non-Trade – Accounts that represent non-trade receivables	$	
	Chargebacks / Returns / Exchanges – Accounts arising from chargebacks, debit memos or other payment deductions taken by an Account Debtor, or arising from product returns and/or exchanges	$	
(C)	AGGREGATE AMOUNT OF ELIGIBLE ACCOUNTS – *line (A) less line (B)*	$	
(D)	ACCOUNTS ADVANCE RATE:		85.0%
(E)	AGGREGATE AMOUNT OF ELIGIBLE INVENTORY	$	
(F)	INVENTORY AMOUNT CAP	$4,000,000	
(G)	BORROWING BASE INVENTORY AMOUNT – *lesser of line (E) and line (F)*	$	
(H)	INVENTORY ADVANCE RATE:		25.0%
(I)	BORROWING BASE – *line (C) multiplied by line (D) plus line (G) multiplied by line (H)*	$	
(J)	REVOLVING LINE AMOUNT:	$12,000,000	
(K)	OUTSTANDING AMOUNTS UNDER REVOLVING LINE – *sum of below outstanding amounts*	$	
	Outstanding Advances:	$	
	Outstanding Amounts under Letter of Credit Sublimit	$	
	Outstanding Amounts under Cash Management Services Sublimit	$	
(L)	AVAILABILITY AMOUNT – *lesser of line (I) and line (J) less line (K)*	$	

BORROWER REPRESENTATIVE:

VAPOTHERM, INC.

By: _____
Name: _____
Title: _____

Exhibit 10.8

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT (as the same may be amended, restated, amended and restated, modified, or supplemented from time to time, this "**Agreement**") dated as of February 18, 2022 (the "**Effective Date**") among SLR Investment Corp., a Maryland corporation with an office located at 500 Park Avenue, 3rd Floor, New York, NY 10022 ("**SLR**"), as collateral agent (in such capacity, together with its successors and permitted assigns in such capacity, "**Collateral Agent**"), and the lenders listed on Schedule 1.1 hereof or otherwise a party hereto from time to time including SLR in its capacity as a Lender (each a "**Lender**" and collectively, the "**Lenders**"), Vapotherm, Inc., a Delaware corporation with offices located at 100 Domain Drive, Exeter, NH 03833 (the "**Borrower**"), HGE HEALTH CARE SOLUTIONS, LLC, a Delaware limited liability company ("**HGE**"), VAPOTHERM ACCESS CARE MANAGEMENT NETWORK, LLC, a Delaware limited liability company ("**Vapotherm Network**"), and VAPOTHERM ACCESS MANAGEMENT SERVICES, LLC, an Oklahoma limited liability company ("**Vapotherm Services**"), as Guarantors and each other Guarantor party hereto from time to time, provides the terms on which the Lenders shall lend to Borrower and Loan Parties shall repay the Lenders. The parties agree as follows:

1. DEFINITIONS AND OTHER TERMS

1.1 Terms. Capitalized terms used herein shall have the meanings set forth in Section 1.4 to the extent defined therein. All other capitalized terms used but not defined herein shall have the meaning given to such terms in the Code. Any accounting term used but not defined herein shall be construed in accordance with GAAP and all calculations shall be made in accordance with GAAP, consistently applied; provided that all leases of any Person that were or would have been characterized as operating leases in accordance with GAAP as of December 31, 2018 (whether or not such operating leases were in effect on such date) shall be accounted for as operating leases (and not capital leases) for purposes of this Agreement regardless of any change in GAAP following such date that would otherwise require such leases to be recharacterized (on a prospective or retroactive basis or otherwise) as capital leases. If at any time any change in GAAP would affect the computation of any financial ratio or requirement set forth in any Loan Document, and any of the Borrower, the Collateral Agent or the Required Lenders shall so request, the Collateral Agent, the Lenders and the Borrower on behalf of the Borrower shall negotiate in good faith to amend such ratio or requirement to preserve the original intent thereof in light of such change in GAAP (subject to the approval of the Required Lenders), provided that, until so amended, (i) such ratio or requirement shall continue to be computed in accordance with GAAP prior to such change therein and (ii) the Borrower shall provide to the Collateral Agent and the Lenders financial statements and other documents required under this Agreement or as reasonably requested hereunder setting forth a reconciliation between calculations of such ratio or requirement made before and after giving effect to such change in GAAP. The term "financial statements" shall include the accompanying notes and schedules.

1.2 Section References. Any section, subsection, schedule or exhibit references are to this Agreement unless otherwise specified.

1.3 Divisions. For all purposes under the Loan Documents, in connection with any division or plan of division under Delaware law (or any comparable event under a different jurisdiction's laws): (a) if any asset, right, obligation or liability of any Person becomes the asset, right, obligation or liability of a different Person, then it shall be deemed to have been transferred from the original Person to the subsequent Person, and (b) if any new Person comes into existence, such new Person shall be deemed to have been organized on the first date of its existence by the holders of its equity interests at such time.

1.4 Definitions. The following terms are defined in the Sections or subsections referenced opposite such terms:

"**Agreement**"	Preamble
"**Allocable Amount**"	Section 13.7(b)
"**Approved Lender**"	Section 12.1
"**Borrower**"	Preamble
"**Claims**"	Section 12.2
"**Collateral Agent**"	Preamble
"**Collateral Agent Report"**	Exhibit B, Section 5
"**Communications**"	Section 10
"**Connection Income Taxes**"	Exhibit I, Section 1
"**Default Rate**"	Section 2.3(b)
"**Effective Date**"	Preamble
"**Event of Default**"	Section 8
"**Excluded Accounts**"	Section 6.6(a)
"**Excluded Taxes**"	Exhibit I, Section 1
"**FATCA**"	Exhibit I, Section 1
"**Guarantor Payment**"	Section 13.7(a)
"**Indemnified Person**"	Section 12.2
"**Indemnified Taxes**"	Section 2.5(a)
"**Lender**" and "**Lenders**"	Preamble
"**Lender Transfer**"	Section 12.1
"**New Subsidiary**"	Section 6.10
"**Non-Funding Lender**"	Exhibit B, Section 10(c)(ii)
"**Open Source Licenses**"	Section 5.2(f)
"**Other Connection Taxes**"	Exhibit I, Section 1
"**Other Lender**"	Exhibit B, Section 10(c)(ii)
"**Other Taxes**"	Exhibit I, Section 1
"**Perfection Certificate**" and "**Perfection Certificates**"	Section 5.1
"**Recipient"**	Exhibit I, Section 1
"**Secured Promissory Note**"	Section 2.6
"**SLR**"	Preamble
"**Taxes**"	Section 2.5(a)
"**Term A Loan**"	Section 2.2(a)(i)
"**Term B Loan**"	Section 2.2(a)(ii)
"**Term Loan**"	Section 2.2(a)(iii)
"**Transfer**"	Section 7.1

In addition to the terms defined elsewhere in this Agreement, the following terms have the following meanings:

"**Account**" is any "account" as defined in the Code with such additions to such term as may hereafter be made under the Code, and includes, without limitation, all accounts receivable and other sums owing to any Loan Party.

"**Account Debtor**" is any "account debtor" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**ACH Letter**" is ACH debit authorization in the form of Exhibit F hereto.

"**Acquisition**" means any transaction, or any series of related transactions, by which any Person directly or indirectly, by means of a take-over bid, tender offer, license, amalgamation, merger, purchase of equity interests, purchase of assets, or similar transaction having the same effect as any of the foregoing, (i) acquires all or substantially

all of the assets of any other Person or all or substantially all assets of any business line, division or product line (including research and development and related assets in respect of any product) of any other Person, (ii) acquires more than fifty percent (50%) of the Equity Interests of another Person which, on a fully-diluted basis (and taking into account all Equity Interests the acquiring person has the right or option to acquire) gives such acquiring Person control over such other Person, including by way of power to elect a majority of the members of the board of directors (or equivalent) of such Person or (iii) acquires, or acquires the right to use, develop or sell (in each case, including through licensing), any product, product line or Intellectual Property of or from any other Person.

"**Affiliate**" of any Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors and partners and, for any Person that is a limited liability company, that Person's managers and members.

"**Amortization Date**" is March 1, 2026; *provided* that if as of December 31, 2025, Borrower achieves Net Product Revenue greater than or equal to Sixty-Eight Million Dollars ($68,000,000.00), measured on a trailing six-month basis, calculated consistently with the methodology used in the Projections and subject to the reasonable verification by Collateral Agent (including supporting documentation reasonably requested by Collateral Agent), then, at Borrower's written election to Collateral Agent on or prior to February 1, 2026, there shall be no Amortization Date hereunder.

"**Anti-Terrorism Laws**" are any laws, rules, regulations or orders relating to terrorism or money laundering, including without limitation Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

"**Applicable Rate**" means a per annum rate of interest equal to (a) the greater of (i) 0.10% and (ii) the LIBOR Rate in effect from time to time, plus (b) 8.30%.

"**Approved Fund**" is any (i) investment company, fund, trust, securitization vehicle or conduit that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business or (ii) any Person (other than a natural person) which temporarily warehouses loans for any Lender or any entity described in the preceding clause (i) and that, with respect to each of the preceding clauses (i) and (ii), is administered or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) a Person (other than a natural person) or an Affiliate of a Person (other than a natural person) that administers or manages a Lender.

"**Blocked Person**" is: (a) any Person listed in the annex to Executive Order No. 13224, (b) any Person owned or controlled by, or to the actual knowledge of any Responsible Officer of any Loan Party, any Person acting for or on behalf of, any Person that is listed in the annex to Executive Order No. 13224, (c) to the actual knowledge of any Responsible Officer of any Loan Party, any Person with which any Lender is prohibited from dealing with in any transaction in violation of any Anti-Terrorism Law or (d) any Person named a "specially designated national" or "blocked person" on the most current list published by OFAC.

"**Borrower's Books**" are Borrower's or any of the Guarantor's books and records including ledgers, federal, state, local and foreign tax returns, records regarding Borrower's or the Guarantor's assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

"**Business Day**" is any day that is not a Saturday, Sunday or a day on which commercial banks in New York, New York are required or authorized to be closed.

"**Cash Equivalents**" are (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition and having the highest rating from either Standard & Poor's Ratings Group or Moody's Investors Service, Inc.; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor's Ratings Group or Moody's Investors Service, Inc., (c) certificates of deposit maturing no more

than one (1) year after issue provided that the account in which any such certificate of deposit is maintained is subject to a Control Agreement in favor of Collateral Agent unless such certificates of deposit are entered into to secure (or backstop) Permitted Indebtedness, and (d) any money market or similar funds that exclusively hold any of the foregoing.

"**Code**" is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of New York; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Collateral Agent's Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of New York, the term "Code" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

"**Collateral**" is any and all properties, rights and assets of the Borrower and any Guarantor described on Exhibit A.

"**Collateral Account**" is any Deposit Account, Securities Account, or Commodity Account, or any other bank account maintained by Borrower or any Guarantor at any time, in each case, other than any Excluded Account.

"**Commitment Percentage**" is set forth in Schedule 1.1, as amended from time to time.

"**Commodity Account**" is any "commodity account" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**Compliance Certificate**" is that certain certificate in substantially the form attached hereto as Exhibit D.

"**Contingent Obligation**" is, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such as an obligation directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; but "Contingent Obligation" does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith and, to the extent applicable, in accordance with GAAP; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

"**Control Agreement**" is any control agreement entered into among the depository institution at which Borrower or any Guarantor maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower or any Guarantor maintains a Securities Account or a Commodity Account, Borrower or such Guarantor, as applicable, and Collateral Agent pursuant to which Collateral Agent, for the ratable benefit of the Secured Parties, obtains "control" (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

"**Copyrights**" are any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

"**Deposit Account**" is any "deposit account" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**Disqualified Institution**" is, as of the date of determination, a Person (i) identified by the Borrower in writing to the Collateral Agent on or prior to the Effective Date as a competitor (or as an Affiliate of a competitor) of the Borrower and its Subsidiaries, (ii) identified by the Borrower in writing to the Collateral Agent from time to time after the Effective Date as a competitor (or as an Affiliate of a competitor) of the Borrower and its Subsidiaries and (iii) any reasonably identifiable Affiliate of any Person referred to in clauses (i) or (ii) above solely on the basis of its name; provided that the foregoing shall not apply retroactively to disqualify any Persons that have previously acquired an assignment or participation interest in the Term Loans to the extent such party was not a Disqualified Institution at the time of the applicable assignment or participation, as the case may be.

"**Dollars**," "**dollars**" and "$" each mean lawful money of the United States.

"**Domestic Subsidiary**" means a Subsidiary that is organized under the laws of the United States or any state or territory thereof.

"**Eligible Assignee**" is (i) a Lender, (ii) an Affiliate of a Lender, (iii) an Approved Fund and (iv) any commercial bank, savings and loan association or savings bank or any other entity which is an "accredited investor" (as defined in Regulation D under the Securities Act of 1933, as amended) and which extends credit or buys loans as one of its businesses, including insurance companies, mutual funds, lease financing companies and commercial finance companies, in each case, which either (A) has a rating of BBB or higher from Standard & Poor's Rating Group and a rating of Baa2 or higher from Moody's Investors Service, Inc. at the date that it becomes a Lender or (B) has total assets in excess of One Billion Dollars ($1,000,000,000.00); provided that notwithstanding the foregoing, "Eligible Assignee" shall not include, unless an Event of Default has occurred and is continuing, (1) Borrower or any of Borrower's Affiliates or Subsidiaries, or (2) a Disqualified Institution. Notwithstanding the foregoing, (x) in connection with any assignment by a Lender as a result of a forced divestiture at the request of any regulatory agency, the restrictions set forth above in this definition shall not apply and Eligible Assignee shall mean any Person or party and (y) in connection with a Lender's own financing or securitization transactions, the restrictions set forth above in this definition shall not apply and Eligible Assignee shall mean any Person or party providing such financing or formed to undertake such securitization transaction and transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence, with respect to such financing or securitization transaction; provided that no such sale, transfer, pledge or assignment under this clause (y) shall release such Lender from any of its obligations hereunder or substitute any such Person or party for such Lender as a party hereto until Collateral Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee as Collateral Agent reasonably shall require.

"**Equipment**" is all "equipment" as defined in the Code with such additions to such term as may hereafter be made under the Code, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

"**ERISA**" is the Employee Retirement Income Security Act of 1974, as amended, and its regulations.

"**Exigent Circumstance**" means any event or circumstance that, in the reasonable judgment of Collateral Agent, imminently threatens the ability of Collateral Agent to realize upon all or any material portion of the Collateral, such as, without limitation, fraudulent removal, concealment, or abscondment thereof, destruction or material waste thereof, or failure of Borrower or any of its Subsidiaries after reasonable demand to maintain or reinstate casualty insurance coverage required by Section 6.5, or which, in the judgment of Collateral Agent, could reasonably be expected to result in a material diminution in value of the Collateral.

"**Existing Credit Facilities**" refers to that certain Loan and Security Agreement, dated as of October 1, 2020 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time prior to the Effective Date), between the Borrower and Canadian Imperial Bank of Commerce and all "Loan Documents" referred to therein.

"**FDA**" means the U.S. Food and Drug Administration or any successor thereto.

"**Fee Letter**" means that certain Fee Letter dated the Effective Date, between the Borrower and SLR and acknowledged by the other Loan Parties, as amended, amended and restated, supplemented or otherwise modified from time to time.

"**Foreign Subsidiary**" means a Subsidiary that is not a Domestic Subsidiary.

"**Funding Date**" is any date on which a Term Loan is made to or on account of Borrower which shall be a Business Day.

"**GAAP**" is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession in the United States, which are applicable to the circumstances as of the date of determination.

"**General Intangibles**" are all "general intangibles" as defined in the Code with such additions to such term as may hereafter be made under the Code, and includes without limitation, all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work, whether published or unpublished, any patents, trademarks, service marks and, to the extent permitted under applicable law, any applications therefor, whether registered or not, any trade secret rights, including any rights to unpatented inventions, payment intangibles, royalties, contract rights, goodwill, franchise agreements, purchase orders, customer lists, route lists, telephone numbers, domain names, claims, income and other tax refunds, security and other deposits, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

"**Governmental Approval**" is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

"**Governmental Authority**" is any federal, state, municipal, national or other government, governmental department, commission, board, bureau, court, agency or instrumentality or political subdivision thereof (including the FDA), or any entity or officer exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to any government or any court, in each case whether associated with a state or locality of the United States, the United States, or a foreign government.

"**Guarantor**" is any Person providing a Guaranty in favor of Collateral Agent for the benefit of the Secured Parties (including without limitation pursuant to Section 6.10 and/or Section 13).

"**Guaranty**" is any guarantee in form and substance reasonably satisfactory to the Collateral Agent and the applicable Guarantor of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

"**Indebtedness**" is (without duplication) (a) indebtedness for borrowed money or the deferred price of property or services (other than trade payables in the ordinary course of business and not overdue by more than 90 days,), (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) all obligations of such Person as lessee under capital lease obligations that have been or should be recorded as liabilities on a balance sheet of such Person in accordance with GAAP, (d) non-contingent obligations of such Person to reimburse any bank or other Person in respect of amounts paid under a letter of credit, banker's acceptance, surety bonds or similar instruments, (e) equity securities of such Person subject to repurchase or redemption prior to the Maturity Date other than at the sole option of such Person (f) Indebtedness secured by a Lien on any asset of such Person, whether or not such obligation is otherwise an obligation of such Person (with the amount thereof being measured as the fair market value of such property), (g) "earnouts" (to the extent due and owing and not paid in a timely manner), purchase price adjustments, profit sharing arrangements, deferred purchase money amounts and similar payment obligations or continuing obligations of any nature of such Person arising out of purchase and sale contracts (in each case, other than trade

payables in the ordinary course of business), (h) all Indebtedness of others guaranteed by such Person, (i) off-balance sheet liabilities and/or pension plan or multiemployer plan liabilities of such Person, (j) obligations arising under non-compete agreements, (k) obligations arising under bonus, deferred compensation, incentive compensation or similar arrangements, other than those arising in the ordinary course of business and (l) Contingent Obligations.

"**Insolvency Proceeding**" is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions or proceedings seeking reorganization, arrangement, or other relief.

"**Insolvent**" means not Solvent.

"**Intellectual Property**" means all of Borrower's or any of its Subsidiaries' right, title and interest in and to the following:

(a) its Copyrights, Trademarks and Patents;

(b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;

(c) any and all source code;

(d) any and all design rights which may be available to Borrower or any of its Subsidiaries;

(e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and

(f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

"**Intellectual Property Security Agreement**" means any Intellectual Property Security Agreement between Borrower (or a Guarantor) and Collateral Agent, as the same may from time to time be amended, restated, modified or otherwise supplemented.

"**Internal Revenue Code**" means the Internal Revenue Code of 1986, as amended.

"**Inventory**" is all "inventory" as defined in the Code with such additions to such term as may hereafter be made under the Code, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of any Person's custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

"**Investment**" is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance or capital contribution to any Person.

"**IRS**" means the United States Internal Revenue Service.

"**Key Person**" is each of Borrower's (i) President and Chief Executive Officer, who is Joseph Army as of the Effective Date and (ii) Chief Financial Officer, who is John Landry as of the Effective Date.

"**Knowledge**" means to the "best of" any Loan Party's knowledge, or with a similar qualification, knowledge or awareness means the actual knowledge, after reasonable investigation, of the Responsible Officers.

"**Lender**" is any one of the Lenders.

"**Lenders**" are the Persons identified on Schedule 1.1 hereto and each assignee that becomes a party to this Agreement pursuant to Section 12.1.

"**Lenders' Expenses**" are (a) all reasonable and documented out-of-pocket audit fees and expenses, costs, and expenses (including reasonable and documented attorneys' fees and expenses of outside counsel, as well as appraisal fees, fees incurred on account of lien searches, inspection fees, and filing fees) for preparing, amending, negotiating and administering the Loan Documents, all as incurred by SLR, in its capacity as a Lender and as Collateral Agent, and (b) all reasonable and documented out-of-pocket fees and expenses (including reasonable and documented attorneys' fees of outside counsel and expenses, as well as appraisal fees, fees incurred on account of lien searches, inspection fees, and filing fees) for defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) incurred by Collateral Agent and/or the Lenders.

"**LIBOR Rate**" means the rate per annum equal to the rate published by the Intercontinental Exchange Benchmark Administration Ltd. (the "**Service**") (or on any successor or substitute page of such Service, or any successor to or substitute for such Service, or, in the event such rate is not available, such rate from time to time as determined by the Collateral Agent in its reasonable discretion) for a term of one month, which determination by Collateral Agent shall be conclusive in the absence of manifest error; provided that if, at any time the Collateral Agent reasonable determines that (x) Lenders are unable to determine or ascertain such rate, (y) the applicable regulator has made public statements to the effect that the rate published by the Service is no longer used for determining interest rates for loans or (z) by reason of circumstances affecting the foreign exchange and interbank markets generally, deposits in eurodollars in the applicable amounts or for the relative maturities are not being offered for such period, then the LIBOR Rate under this clause (z) shall be equal to a one (1) month benchmark rate and spread determined by Collateral Agent in its reasonable judgment (which may include SOFR, to the extent publicly available quotes of SOFR exist at the relevant time), in consultation with Borrower, giving due consideration to (i) market convention for any U.S. dollar-denominated syndicated credit facilities at such time or (ii) selection, endorsement or recommendation by a Relevant Governmental Body. Notwithstanding anything to the contrary contained in Section 12.5, such alternative benchmark rate and spread shall be effected by an amendment to this Agreement executed by the Collateral Agent and the Borrower, with such amendment being effective and binding on all parties hereto unless the Required Lenders object within five (5) days following notification of such amendment.

"**Lien**" is a claim, mortgage, deed of trust, levy, charge, pledge, security interest, or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

"**Loan Documents**" are, collectively, this Agreement, the Fee Letter, the Warrants, the Pledge Agreement, each Control Agreement, each Intellectual Property Security Agreement, the Perfection Certificates, the ACH Letter, each Compliance Certificate, each Loan Payment Request Form, any Guarantees, any subordination agreements relating to this Agreement, any note, or notes or guaranties executed by Borrower or any Guarantor in favor of the Collateral Agent or any Lender in connection with this Agreement, any agreements creating or perfecting rights in the Collateral (including all insurance certificates and endorsements, landlord consents and bailee consents) and any other present or future agreement entered into by Borrower or any Guarantor in favor of the Collateral Agent or any Lender in connection with this Agreement; all as amended, restated, or otherwise modified.

"**Loan Payment Request Form**" is that certain form attached hereto as Exhibit C.

"**Material Adverse Change**" is (a) a material adverse change in the business, operations or condition (financial or otherwise) of Borrower and its Subsidiaries, when taken as a whole; or (b) a material impairment of (i) the prospect of repayment of any portion of the Obligations, (ii) the legality, validity or enforceability of any Loan Document, (iii) the rights and remedies of Collateral Agent or Lenders under any Loan Document except as the result of the action or inaction of the Collateral Agent or Lenders or (iv) the validity, perfection or priority of any Lien in favor of Collateral Agent for the benefit of the Secured Parties on any material portion of the Collateral except as the result of the action or inaction of the Collateral Agent or Lenders.

"**Material Agreement**" is any license, agreement or other contractual arrangement whereby Borrower or any of its Subsidiaries is reasonably likely to be required to transfer, either in-kind or in cash, assets or property valued (book or market) at more than Two Million and Five Hundred Thousand Dollars ($2,500,000.00) in the aggregate under, such license, agreement or other contractual arrangement in any calendar year.

"**Maturity Date**" is, for each Term Loan, February 1, 2027.

"**Net Product Revenue**" means, as of a date of determination, product revenue (determined under GAAP) with respect to sale of ordinary course product and service offerings of Borrower and its Subsidiaries and related services directly sold with such product and service offerings, in each case determined in a manner consistent with the financial statements delivered to Collateral Agent on or prior to the Effective Date; *provided* that any revenue associated with any Acquisition shall only contribute to Net Product Revenue to the extent such revenue is actually received following the consummation of such Acquisition and otherwise qualifies as Net Product Revenue.

"**Non-Loan Party**" means any Subsidiary of Borrower that is not a Loan Party.

"**Obligations**" are all of each Loan Party's obligations to pay when due any debts, principal, interest, Lenders' Expenses, the Prepayment Premium, all fees under the Fee Letter and any other amounts any Loan Party owes the Collateral Agent or the Lenders, in connection with, related to, or arising from, out of, or under, this Agreement, or the other Loan Documents, and including interest accruing after Insolvency Proceedings begin (whether or not allowed), including any such debts, liabilities, or obligations of any Loan Party assigned to the Lenders and/or Collateral Agent, and the performance of any Loan Party's duties under the Loan Documents.

"**OFAC**" is the U.S. Department of Treasury Office of Foreign Assets Control.

"**OFAC Lists**" are, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to Executive Order No. 13224, 66 Fed. Reg. 49079 (Sept. 25, 2001) and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

"**Operating Documents**" are, for any Person, such Person's formation documents, as certified by the Secretary of State (or equivalent agency) of such Person's jurisdiction of organization on a date that is no earlier than thirty (30) days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

"**Patents**" means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, re-examination certificates, utility models, extensions and continuations-in-part of the same.

"**Payment Date**" is the first (1st) calendar day of each calendar month, commencing on March 1, 2022.

"**Permitted Acquisition**" means any Acquisition by Borrower or any Subsidiary of the Borrower as to which each of the following conditions is satisfied:

(a) immediately prior to, and after giving effect thereto, no default or Event of Default shall have occurred and be continuing or could reasonably be expected to result therefrom;

(b) all transactions in connection therewith shall be consummated, in all material respects, in accordance with all applicable laws, and in conformity with all applicable Governmental Approvals;

(c) in the case of the purchase of equity interests, such acquired target shall become a direct or indirect Subsidiary of the Borrower;

(d) the Borrower shall have taken, or caused to be taken, as of the date such acquired target becomes a Subsidiary of the Borrower, each of the actions required by Section 6.10 and Section 6.11 and as otherwise required under any Loan Document, as applicable;

(e) after giving pro forma effect to such Acquisition as if it occurred on the first day of the applicable six-month period, the Borrower shall be in compliance with financial covenants set forth in Section 7.13;

(f) the consideration (including cash and non-cash consideration, assumed liabilities, and any deferred or contingent consideration) payable in connection with all such Acquisitions shall not exceed (i) $5,000,000 during any consecutive twelve month period, and (ii) $10,000,000 during the term of this Agreement, in each case, in the aggregate, provided that non-cash consideration shall be valued at the valuation established in such Acquisition, or as otherwise reasonably approved by the Collateral Agent;

(g) promptly upon request by the Collateral Agent in the case of an Acquisition, the Borrower shall provide the following no later than ten (10) days prior to consummation of such Acquisition:

(i) a copy of the draft transaction documents related to the proposed Acquisition (and related documents requested by the Collateral Agent),

(ii) except in case of an Acquisition of assets not expected to result in any material change to operating income or operating expenses, quarterly and annual financial statements of the target for the most recently ended twelve month period ending not less than forty five (45) days prior to such Acquisition, including any audited financial statements that are available, and

(iii) any other information reasonably requested by the Collateral Agent and available to any Loan Party;

(h) the Borrower shall have provided the Collateral Agent with at least ten (10) Business Days' (or such shorter period as agreed by the Collateral Agent) prior written notice of any such Acquisition, together with summaries, prepared in reasonable detail, of all due diligence conducted by or on behalf of the Borrower or the applicable Subsidiary, as applicable, prior to such Acquisition;

(i) the Collateral Agent shall have received a certificate of a Responsible Officer of the Borrower (prepared in reasonable detail), certifying as to any contingent liabilities and prospective research and development costs associated with the Person or assets being acquired;

(j) such Acquisition shall not include any hostile Acquisition;

(k) such Acquisition shall be cash flow neutral or accretive; and

(l) at least three (3) Business Days prior to the proposed date of such Acquisition (or such shorter period as agreed by the Collateral Agent), the Collateral Agent shall have received a certificate of a Responsible Officer of the Borrower (prepared in reasonable detail), certifying that such Acquisition complies with this definition, including calculations as to pro forma covenant compliance, in a form reasonably satisfactory to the Collateral Agent.

"**Permitted Indebtedness**" is:

(a) Each Loan Party's Indebtedness under this Agreement and the other Loan Documents;

(b) Indebtedness existing on the Effective Date and disclosed on the Perfection Certificate;

(c) Indebtedness arising under letters of credit issued for the account of the Borrower or any of its Subsidiaries, in an aggregate face amount for all such letters of credit not to exceed $1,250,000 in the aggregate at any time;

(d) unsecured Indebtedness to trade creditors;

(e) Indebtedness consisting of capitalized lease obligations and purchase money Indebtedness, in each case incurred by Borrower or any of its Subsidiaries to finance the acquisition, repair, improvement or construction of fixed or capital assets of such person, provided that (i) the aggregate outstanding principal amount of all such Indebtedness does not exceed Seven Hundred Fifty Thousand Dollars ($750,000.00) at any time and (ii) the principal amount of such Indebtedness does not exceed the cost of the property so acquired or built or of such repairs or improvements financed with such Indebtedness (each measured at the time of such acquisition, repair, improvement or construction is made);

(f) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of Borrower's or its Subsidiaries' business;

(g) [reserved];

(h) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (e) above, provided that the principal amount thereof is not increased (other than by an amount not to exceed the amount of (i) any accrued but unpaid interest, fees and expenses and premiums related to the debt being refinanced and (ii) customary fees and expenses incurred in connection with such extension, refinancing, modification, amendment or restatement), and the terms thereof are not modified to impose materially more burdensome terms upon Borrower or its Subsidiary, as the case may be;

(i) Contingent Obligations in respect of Indebtedness that otherwise constitutes Permitted Indebtedness;

(j) Indebtedness incurred in connection with the financing of insurance premiums in the ordinary course of business in an outstanding principal amount not to exceed Seven Hundred Fifty Thousand Dollars ($750,000.00) in the aggregate at any time;

(k) Indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument drawn against insufficient funds in the ordinary course of business, provided that such Indebtedness is extinguished within two (2) Business Days of notice to Borrower or the relevant Subsidiary of its incurrence;

(l) Indebtedness arising in connection with the Borrower's credit card program and other cash management services incurred in the ordinary course of business and in an aggregate amount not to exceed Seven Hundred Fifty Thousand Dollars ($750,000) outstanding at any time;

(m) Indebtedness constituting Permitted Investments;

(n) Indebtedness on account of hedging arrangements entered into by the Borrower or any of its Subsidiaries for non-speculative purposes; and

(o) other Indebtedness in an aggregate outstanding principal amount not to exceed Seventy-Five Thousand Dollars ($75,000.00) at any time; provided that such Indebtedness shall not be secured by "all assets" or "substantially all assets" of the Borrower or any Guarantor.

"**Permitted Investments**" are:

(a) Investments disclosed on the Perfection Certificate and existing on the Effective Date;

(b) (i) Investments consisting of cash and Cash Equivalents, and (ii) any Investments permitted by Borrower's investment policy, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved in writing by Collateral Agent in its reasonable discretion; provided further that the investment policy delivered to the Collateral Agent on or prior to the Effective Date is deemed approved by the Collateral Agent;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower or of any of its Subsidiaries;

(d) Investments consisting of guarantees by the Borrower or any of its Subsidiaries of obligations of the Borrower or any of its Subsidiaries consisting of (a) Permitted Indebtedness or (b) obligations that do not constitute Indebtedness;

(e) Investments in connection with Transfers permitted by Section 7.1;

(f) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower's board of directors; not to exceed Three Hundred Thousand Dollars ($300,000.00) in the aggregate for (i) and (ii) in any fiscal year;

(g) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(h) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (h) shall not apply to Investments of Borrower in any Subsidiary;

(i) (A) Investments between the Borrower and any Guarantor, (B) Investments by the Borrower or any Guarantor in Subsidiaries that are not Guarantors, not to exceed Six Hundred Thousand Dollars ($600,000.00) in any fiscal year and (C) Investments by Subsidiaries that are not Guarantors in the Borrower or any Guarantor or in any other Subsidiary that is not a Guarantor;

(j) Investments in joint ventures or strategic alliances in the ordinary course of Borrower's or any of its Subsidiary's business consisting of the non-exclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash Investments by the Borrower and its Subsidiaries in reliance on this clause (j) do not exceed Five Hundred Thousand Dollars ($500,000.00) in the aggregate in any fiscal year;

(k) Permitted Acquisitions;

(l) Investments consisting of hedging arrangements entered into by the Borrower or any of its Subsidiaries for non-speculative purposes and in an aggregate notional amount for all such hedging agreements not in excess of $250,000; and

(m) other Investments not to exceed Seventy Five Thousand Dollars ($75,000.00) during any fiscal year.

"**Permitted Licenses**" are (A) licenses of over-the-counter software that is commercially available to the public, and (B) non-exclusive licenses for the use of the Intellectual Property of Borrower or any of its Subsidiaries entered into in the ordinary course of business, provided, that, with respect to each such license described in clause (B), the license constitutes an arms-length transaction, the terms of which, on their face, do not provide for a sale or assignment of any Intellectual Property and do not restrict the ability of Borrower or any of its Subsidiaries, as applicable, to pledge, grant a security interest in or lien on, or assign or otherwise Transfer any Intellectual Property.

"**Permitted Liens**" are:

(a) Liens existing on the Effective Date and disclosed on the Perfection Certificate;

(b) Liens for Taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith by appropriate proceedings diligently conducted and for which Borrower or the applicable Subsidiary maintains adequate reserves on its books;

(c) Liens securing Indebtedness permitted under clause (e) of the definition of "Permitted Indebtedness," provided that (i) such liens exist prior to the acquisition of, or attach substantially simultaneous with, or within sixty (60) days after the, acquisition, lease, repair, improvement or construction of, such property financed or leased by such Indebtedness and (ii) such liens do not extend to any property of Borrower or any Subsidiary thereof other than the property (and proceeds thereof) acquired, leased or built, or the improvements or repairs, financed by such Indebtedness;

(d) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens secure liabilities which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(e) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(f) Liens incurred in the extension, renewal or refinancing of the Indebtedness secured by Liens described in (a) and (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the Indebtedness may not increase (other than by an amount not to exceed the amount of (i) any accrued but unpaid interest, fees and expenses and premiums related to the Indebtedness being extended, renewed or refinanced and (ii) customary fees and expenses incurred in connection with such extension, renewal or refinancing);

(g) leases or subleases of real property granted in the ordinary course of Borrower's or any of its Subsidiaries' business, and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower's or such Subsidiary's business, if the leases, subleases, licenses and sublicenses granted by the Borrower or any Guarantor do not prohibit granting Collateral Agent or any Lender a security interest therein;

(h) banker's liens, rights of setoff and Liens in favor of financial institutions incurred in the ordinary course of business arising in connection with Borrower's or its Subsidiaries' deposit accounts or securities accounts held at such institutions solely to secure payment of fees, costs, expenses and similar items and provided such accounts are maintained in compliance with Section 6.6(a) hereof;

(i) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Section 8.4 or 8.7;

(j) Permitted Licenses;

(k) cash collateral securing Indebtedness permitted by clause (c) of the definition of "Permitted Indebtedness"; provided that the aggregate amount of any such cash collateral provided to secure any letter of credit shall not exceed 105% of the face amount of such letter of credit;

(l) Liens arising from precautionary uniform commercial code financing statements filed under any lease permitted by this Agreement;

(m) Liens securing Indebtedness incurred under clause (l) of the definition of "Permitted Indebtedness" in an aggregate amount not to exceed Seven Hundred Fifty Thousand Dollars ($750,000.00) at any time;

(n) Liens securing the Obligations; and

(o) other Liens on assets (which shall not be "all assets" or "substantially all assets" of the Borrower or any Guarantor) securing Indebtedness or other obligations in an aggregate principal amount at any time outstanding not to exceed Seventy Five Thousand Dollars ($75,000.00).

"**Person**" is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

"**Pledge Agreement**" means the Pledge Agreement dated as of the Effective Date between each Loan Party and Collateral Agent, as the same may from time to time be amended, restated, modified or otherwise supplemented.

"**Prepayment Premium**" is, with respect to any Term Loan subject to prepayment (including, without limitation, as a result of any refinancing, substitution or replacement) prior to the Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise (including, but not limited to, upon the occurrence of a bankruptcy or insolvency event (including the acceleration of claims by operation of law)), an additional fee payable to the Lenders in amount equal to:

(i) for such a prepayment made during the period commencing on the Effective Date and ending on the day immediately preceding the first anniversary of the Effective Date, three percent (3.00%) of the principal amount of such Term Loan prepaid;

(ii) for such a prepayment made during the period commencing on the first anniversary of the Effective Date and ending on the date immediately preceding the second anniversary of the Effective Date, two percent (2.00%) of the principal amount of such Term Loan prepaid; and

(iii) for such a prepayment made during the period commencing on the second anniversary of the Effective Date and ending on the day immediately preceding the Maturity Date, one percent (1.00%) of the principal amount of the Term Loans prepaid.

Notwithstanding the foregoing, the Prepayment Premium shall be zero percent (0.00%) of the principal amount of the Term Loan prepaid in the event that any such prepayment of the Term Loans (a) results from SLR or any Affiliate of SLR (in their sole and absolute discretion) refinancing the Term Loans or (b) is made, at Collateral Agent's option, in accordance with Section 6.5.

"**Projections**" are the projections delivered and accepted by Collateral Agent and the Lenders on or prior to the Effective Date.

"**Property**" means any interest in any kind of property or asset, whether real, personal or mixed, and whether tangible or intangible.

"**Pro Rata Share**" is, as of any date of determination, with respect to each Lender, a percentage (expressed as a decimal, rounded to the ninth decimal place) determined by dividing the outstanding principal amount of Term Loans held by such Lender by the aggregate outstanding principal amount of all Term Loans.

"**Registered Organization**" is any "registered organization" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**Registration**" means any registration, authorization, approval, license, permit, clearance, certificate, and exemption required by the FDA or state pharmacy licensing authorities (including, without limitation, new drug applications, abbreviated new drug applications, biologics license applications, investigational new drug applications, over-the-counter drug monograph, device pre-market approval applications, device pre-market notifications, investigational device exemptions, product recertifications, manufacturing approvals, registrations and authorizations, CE Marks, pricing and reimbursement approvals, labeling approvals or their foreign equivalent and controlled substance registrations).

"**Regulatory Action**" means an administrative, regulatory, or judicial enforcement action, proceeding, investigation, FDA Form 483 notice of inspectional observation, warning letter, untitled letter, mandatory recall, seizure, Section 305 notice or other similar written communication, injunction or consent decree, issued by the FDA or a federal or state court.

"**Related Persons**" means, with respect to any Person, each Affiliate of such Person and each director, officer, employee, agent, trustee, representative, attorney, accountant and each insurance, environmental, legal, financial and other advisor and other consultants and agents of or to such Person or any of its Affiliates.

"**Relevant Governmental Body**" means the Federal Reserve Board, the Federal Reserve Bank of New York, and/or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York, or any successor thereto.

"**Required Lenders**" means, as of the date of determination, Lenders holding Term Loans and Term Loan Commitments representing more than 50% of the sum of the principal amount of the Term Loans and Term Loan Commitments outstanding as of such date, provided that as set forth in Section 10(c) of Exhibit B, no Non-Funding Lender shall be included in the determination of "Required Lenders".

"**Requirement of Law**" is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"**Responsible Officer**" is any of the President, Chief Executive Officer, or Chief Financial Officer of any Loan Party acting alone.

"**Second Draw Minimum Revenue**" is Borrower's achievement, as of the last day of any month ending on or prior to November 30, 2023, of Net Product Revenue greater than or equal to Fifty-Three Million and Five Hundred Thousand Dollars ($53,500,000.00), measured on a trailing six-month basis, calculated consistently with the methodology used in the Projections and subject to reasonable verification by Collateral Agent (including supporting documentation reasonably requested by Collateral Agent).

"**Second Draw Termination Date"** means December 20, 2023.

"**Secured Parties**" means the Collateral Agent and the Lenders.

"**Securities Account**" is any "securities account" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**SOFR**" means the daily Secured Overnight Financing Rate provided by the Federal Reserve Bank of New York as the administrator of the benchmark (or a successor administrator) on the Federal Reserve Bank of New York's Website.

"**Solvent**" means, with respect to any Person, that, on a consolidated basis, (a) the fair salable value of such Person's and its Subsidiaries' assets (including goodwill minus disposition costs) exceeds the fair value of such Person's and its Subsidiaries' liabilities, (b) such Person and its Subsidiaries are not left with unreasonably small capital after giving effect to the transactions contemplated by this Agreement and the other Loan Documents, and (c) such Person and its Subsidiaries are able to pay their debts (including trade debts) as they mature in the ordinary course.

"**Subsidiary**" is, with respect to any Person, any Person of which more than fifty percent (50%) of the voting stock or other equity interests (in the case of Persons other than corporations) is owned or controlled, directly or indirectly, by such Person or through one or more intermediaries. Unless the context requires otherwise, each reference to a Subsidiary herein shall be a reference to a direct or indirect Subsidiary of the Borrower.

"**Taxes**" means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"**Term Loan Commitment**" is, for any Lender, the obligation of such Lender to make a Term Loan, up to the principal amount shown on Schedule 1.1**.**

"**Term Loan Commitments**" means the aggregate amount of such commitments of all Lenders.

"**Termination Date**" is the date on which (i) all of the Term Loan Commitments are terminated and (ii) all Obligations (other than inchoate indemnity obligations, obligations arising under the Warrants and any other obligations which, by their terms, are to survive the termination of this Agreement) have been paid in full in cash.

"**Trademarks**" means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower and each of its Subsidiaries connected with and symbolized by such trademarks.

"**Unqualified Opinion**" means an opinion on financial statements from an independent certified public accounting firm acceptable to Collateral Agent in its reasonable discretion which opinion shall not include any qualifications or any going concern limitations (except for such qualifications relating to the impending maturity of the Term Loans).

"**Warrants**" are those certain Warrants to Purchase Stock dated on or after the Effective Date issued by Borrower in favor of the a Lender (or any Affiliate of such Lender).

"**Wholly-Owned Subsidiary**" of any Person means a Subsidiary of such Person, all of the equity interests of which (other than directors' qualifying shares or nominee or other similar shares required pursuant to applicable law) are owned by such Person or any other Wholly-Owned Subsidiary of such Person.

2. LOANS AND TERMS OF PAYMENT

2.1 Promise to Pay. Borrower hereby unconditionally promises to pay each Lender, the outstanding principal amount of all Term Loans advanced to Borrower by such Lender and accrued and unpaid interest thereon and any other amounts due hereunder as and when due in accordance with this Agreement.

2.2 Term Loans.

(a) Availability. (i) Subject to the satisfaction (or waiver in accordance with the terms hereof) of the conditions precedent contained in Sections 3.1 and 3.2, the Lenders agree, severally and not jointly, to make term loans to Borrower on the Effective Date in an aggregate principal amount of One Hundred Million Dollars ($100,000,000.00) according to each Lender's Term Loan Commitment for the Term A Loan as set forth on Schedule 1.1 hereto (such term loans referred to herein singly as a "**Term A Loan**", and collectively as the "**Term A Loans**"). After repayment, no Term A Loan may be re-borrowed.

(ii) Subject to (A) Borrower achieving the Second Draw Minimum Revenue as of the last day of the month ending immediately prior to such draw for which financial statements have been (or were required to be) delivered to the Collateral Agent and the Lenders pursuant to Section 6.2(a)(i) and (B) the satisfaction of the conditions precedent contained in Section 3.2, the Lenders agree, severally and not jointly, at any time prior to the Second Draw Termination Date, to make term loans to Borrower in an aggregate principal amount of up to Twenty Five Million Dollars ($25,000,000.00) according to each Lender's Term Loan Commitment for the Term B Loan as set forth on Schedule 1.1 hereto (such term loans referred to herein singly as a "**Term B Loan**", and collectively as the "**Term B Loans**"; the Term A Loans and the Term B Loans are collectively referred to herein as the "**Term Loans**". After repayment, no Term B Loan may be re-borrowed.

(b) Repayment. Borrower shall make monthly payments of interest only commencing on the first (1st) Payment Date following the Funding Date of each Term Loan, and continuing on each successive Payment Date thereafter through and including the Payment Date immediately preceding the Amortization Date (or, if there is no Amortization Date pursuant to the definition thereof, the Maturity Date), with such interest payments being made to the Collateral Agent for the benefit of the Lenders (or, if there are only one (1) or two (2) Lenders, Borrower shall make such payments directly to such Lenders) in accordance with their respective Pro Rata Shares, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon the effective rate of interest applicable to the Term Loan, as determined in Section 2.3(a). Commencing on the Amortization Date (if any), and continuing on each successive Payment Date thereafter, Borrower shall (i) make monthly payments of interest, to Collateral Agent for the benefit of the Lenders (or, if there are only one (1) or two (2) Lenders, Borrower shall make payment directly to such Lenders) in accordance with their respective Pro Rata Shares, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon the effective rate of interest applicable to the Term Loan, as determined in Section 2.3(a) and (ii) make consecutive equal monthly payments of principal to Collateral Agent for the benefit of the Lenders (or, if there are only one (1) or two (2) Lenders, Borrower shall make payment directly to such Lenders) in accordance with their respective Pro Rata Shares, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon: (A) the respective principal amounts of such Lender's Term Loans outstanding as of the Amortization Date, and (B) a repayment schedule equal to the remaining months from the Amortization Date through the Maturity Date. All unpaid principal and accrued and unpaid interest with respect to each such Term Loan is due and payable in full on the Maturity Date. The Term Loans may only be prepaid in accordance with Sections 2.2(c), 2.2(d) or 6.5.

(c) Mandatory Prepayments. If the Term Loans are accelerated in accordance with Section 9.1(a) prior to the Maturity Date, Borrower shall immediately pay to Lenders, payable to each Lender in accordance with its respective Pro Rata Share, an amount equal to the sum of: (i) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon, (ii) any fees due and payable under the Fee Letter by reason of such payment, (iii) the Prepayment Premium, plus (iv) all other Obligations that are due and payable, including any Lenders' Expenses and any interest (if any) at the Default Rate to the extent imposed in accordance with Section 2.3(b) below. Notwithstanding (but without duplication of) the foregoing, on the Maturity Date, if any fees that become due and payable under the Fee Letter by reason of such acceleration have not previously been paid in full in connection with such acceleration, Borrower shall pay such fees to Collateral Agent for the benefit of the Lenders (or, if there is only one (1) or two (2) Lenders, Borrower shall make such payment directly to such Lenders) to the extent imposed in accordance with the Fee Letter. For the avoidance of doubt, the Prepayment Premium shall also be payable in the event the Term Loans are satisfied or released by a foreclosure (whether by power of judicial proceeding), deed in lieu of foreclosure or by any other means prior to the Maturity Date. THE BORROWER AND GUARANTOR EXPRESSLY WAIVES (TO THE FULLEST EXTENT IT MAY LAWFULLY DO SO) THE PROVISIONS OF ANY PRESENT OR FUTURE STATUTE OR LAW THAT PROHIBITS OR MAY PROHIBIT THE COLLECTION OF THE FOREGOING PREPAYMENT PREMIUM IN CONNECTION WITH ANY SUCH ACCELERATION.

(d) Permitted Prepayment of Term Loans and Termination of Term Loan Commitments. Borrower shall have the option to (a) prepay all, but not less than all of the outstanding principal balance of the Term Loans advanced by the Lenders under this Agreement and (b) terminate all, but not less than all of the outstanding Term Loan Commitments, provided Borrower (i) provides written notice to Collateral Agent of its election to prepay the Term Loans and terminate the Term Loan Commitments at least five (5) Business Days prior to such prepayment and termination, and (ii) pays to the Lenders on the date of such prepayment, payable to Collateral Agent for the benefit of the Lenders (or, if there are only one (1) or two (2) Lenders, Borrower shall make payment directly to such Lenders) in accordance with their respective Pro Rata Shares, an amount equal to the sum of (A) the outstanding principal of the Term Loans plus accrued and unpaid interest thereon through (but not including) the prepayment date, (B) any fees payable under Fee Letter by reason of such prepayment, (C) the Prepayment Premium, plus (D) all other Obligations that are due and payable on such prepayment date, including any Lenders' Expenses and interest (if any) at the Default Rate to the extent imposed in accordance with Section 2.3(b) below; provided that, if such notice of prepayment and termination indicates that any such prepayment is to be funded with the proceeds of a refinancing and/or any such termination is conditioned on the closing of such refinancing, such notice may be revoked or delayed if the financing is not consummated on or prior to the effective date of such prepayment and termination.

2.3 Payment of Interest on the Term Loans.

(a) Interest Rate. Subject to Section 2.3(b), the principal amount outstanding under the Term Loans shall accrue interest at a floating per annum rate equal to the Applicable Rate in effect from time to time, which aggregate interest rate shall be determined by Collateral Agent on the third Business Day prior to the Funding Date of the applicable Term Loan and on the date occurring on the first Business Day of each month commencing thereafter (it being understood and agreed that the Applicable Rate as so determined on the Effective Date or on the first Business Day of each month commencing thereafter shall be effective from and after such date of determination until the First Business Day of the month commencing immediately after such determination), which interest shall be payable monthly in arrears in accordance with Sections 2.2(b) and 2.3(e). Such interest shall accrue on the outstanding principal amount of each Term Loan, during the period commencing on, and including, the Funding Date of such Term Loan, and ending on but not including, the day on which such Term Loan is paid in full (or any payment is made hereunder).

(b) Default Rate. Unless otherwise agreed by the Required Lenders, immediately upon the occurrence and during the continuance of an Event of Default, all overdue Obligations shall accrue interest at a fixed per annum rate equal to the rate that is otherwise applicable thereto plus five percentage points (5.00%) (the "**Default Rate**"). Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Collateral Agent.

(c) 360-Day Year. Interest shall be computed on the basis of a three hundred sixty (360) day year for the actual number of days elapsed.

(d) [Reserved].

(e) Payments. Except as otherwise expressly provided herein, all payments by any Loan Party under the Loan Documents shall be made to Collateral Agent for the benefit of the Lenders (or, if there are only one (1) or two (2) Lenders, Borrower shall make payment directly to such Lenders), at such Person's office in immediately available funds on the date specified herein. Unless otherwise provided, interest is payable monthly on each Payment Date. Payments of principal and/or interest received after 2:00 p.m. New York time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment is due the next Business Day and additional fees or interest, as applicable, shall continue to accrue until paid. All payments to be made by any Loan Party hereunder or under any other Loan Document, including payments of principal and interest, and all fees, expenses, indemnities and reimbursements, shall be made without set-off, recoupment or counterclaim, in lawful money of the United States and in immediately available funds. Collateral Agent may at its discretion and with prior notice of at least three (3) Business Days, initiate debit entries to the Borrower's account as authorized on the ACH Letter (i) on each payment date of all Obligations then due and owing and (ii) at any time any payment due and owing with respect to Lenders' Expenses.

2.4 Fees. The Borrower shall pay to Collateral Agent and/or the applicable Lenders (as applicable) the following fees, which shall be deemed fully earned and non-refundable upon payment:

(a) Fee Letter. When due and payable under the terms of the Fee Letter, to Collateral Agent and each applicable Lender, as applicable, the fees set forth in the Fee Letter.

(b) Prepayment Premium. Any applicable Prepayment Premium, if and when due hereunder, to be shared between the Lenders in accordance with their respective Pro Rata Shares. Borrower expressly agrees (to the fullest extent that each may lawfully do so) that: (i) the Prepayment Premium is reasonable and is the product of an arm's length transaction between sophisticated business people, ably represented by counsel; (ii) the Prepayment Premium shall be payable notwithstanding the then prevailing market rates at the time payment is made; (iii) there has been a course of conduct between Collateral Agent, Lenders and Borrower giving specific consideration in this transaction for such agreement to pay the Prepayment Premium and (iv) Borrower shall be estopped hereafter from claiming differently than as agreed to in this paragraph. Borrower expressly acknowledges that its agreement to pay any applicable Prepayment Premium to Lenders if and when due as herein described is a material inducement to Lenders to provide the Term Loan Commitments and make the Term Loans.

(c) Lenders' Expenses. All Lenders' Expenses incurred through the Effective Date to the extent invoiced prior to the Effective Date and thereafter within five days following receipt of the corresponding invoice(s).

2.5 Taxes; Increased Costs. Each Loan Party, Collateral Agent and the Lenders each hereby agree to the terms and conditions set forth on Exhibit I attached hereto.

2.6 Secured Promissory Notes. If requested by a Lender, the Term Loans shall be evidenced by a Secured Promissory Note or Notes in the form attached as Exhibit G hereto (each a "**Secured Promissory Note**"), and shall be repayable as set forth in this Agreement. Borrower irrevocably authorizes each Lender to make or cause to be made, on or about the Funding Date of any Term Loan or at the time of receipt of any payment of principal on such Lender's Secured Promissory Note, an appropriate notation on such Lender's Secured Promissory Note record reflecting the making of such Term Loan or (as the case may be) the receipt of such payment. The outstanding amount of each Term Loan set forth on such Lender's Secured Promissory Note record shall be, absent manifest error, prima facie evidence of the principal amount thereof owing and unpaid to such Lender, but the failure to record, or any error in so recording, any such amount on such Lender's Secured Promissory Note record shall not limit or otherwise affect the obligations of Borrower under any Secured Promissory Note or any other Loan Document to make payments of principal of or interest on any Secured Promissory Note when due. Upon receipt of an affidavit of an officer of a Lender as to the loss, theft, destruction, or mutilation of its Secured Promissory Note, Borrower shall issue, in lieu thereof, a replacement Secured Promissory Note in the same principal amount thereof and of like tenor.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Term Loan. Each Lender's obligation to make a Term A Loan on the Effective Date is subject to the condition precedent that Collateral Agent and each Lender shall have received, in form and substance reasonably satisfactory to Collateral Agent and each Lender the following:

(a) copies of the Loan Documents, each duly executed by Borrower and each Guarantor, as applicable;

(b) duly executed Warrants (substantially consistent with the form of Warrant attached hereto as Exhibit H), each dated as of the Effective Date, and exercisable for a total number of shares of Common Stock (as defined in the Warrants) in the aggregate equal to the quotient derived by dividing (i) 1.5% times the aggregate principal amount of the Term A Loans funded by the Lenders by (ii) the applicable Warrant Price (as defined in such Warrants), rounded to the nearest whole share;

(c) copies of duly executed Control Agreements with respect to any Collateral Accounts maintained by Borrower or any Guarantor;

(d) a completed Perfection Certificate for Borrower and each Guarantor;

(e) the Operating Documents and good standing certificates of Borrower and the Guarantors certified by the Secretary of State (or equivalent agency) of Borrower's and such Guarantors' jurisdiction of organization or formation and each jurisdiction in which Borrower is qualified to conduct business (except where the failure to be so qualified would not result in a Material Adverse Change), each, as of a date no earlier than thirty (30) days prior to the Effective Date;

(f) a certificate of Borrower and each Guarantor in substantially the form of Exhibit E hereto executed by the Secretary (or other authorized officer) of Borrower and each Guarantor with appropriate insertions and attachments, including with respect to (i) the Operating Documents of Borrower (which Certificate of Incorporation (or equivalent Operating Document) of Borrower and each Guarantor shall be certified by the Secretary of State (or equivalent agency) of such entity's jurisdiction of organization) and (ii) the resolutions adopted by Borrower's and each Guarantor's board of directors or other governing body for the purpose of approving the transactions contemplated by the Loan Documents;

(g) certified copies, dated as of date no earlier than thirty (30) days prior to the Effective Date, of financing statement searches, as Collateral Agent shall request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Term Loan, will be terminated or released;

(h) a customary legal opinion of counsel to Borrower and each Guarantor dated the Effective Date;

(i) evidence satisfactory to Collateral Agent and the Lenders that the insurance policies required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing loss payable and/or additional insured clauses or endorsements in favor of Collateral Agent, for the ratable benefit of the Secured Parties;

(j) a customary payoff letter of Canadian Imperial Bank of Commerce in respect of the Existing Credit Facilities; and

(k) concurrently with the funding of the Term A Loan, payment of (i) the fees payable on the Effective Date under the terms of the Fee Letter and (ii) Lender Expenses to the extent an invoice thereof has been provided to the Borrower on or prior to the Business Day immediately preceding the Effective Date.

3.2 Conditions Precedent to all Term Loans. The obligation of each Lender to extend each Term Loan, including the initial Term Loan, is subject to the following conditions precedent:

(a) receipt by Collateral Agent of an executed Loan Payment Request Form in the form of Exhibit C attached hereto;

(b) the representations and warranties in Section 5 hereof shall be true and correct in all material respects on the Funding Date of each Term Loan; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true and correct in all material respects as of such date;

(c) there has not been any Material Adverse Change;

(d) in connection with the issuance of the Term B Loans, (i) duly executed Warrants (substantially consistent with the form of Warrant attached hereto as Exhibit H), exercisable for a total number of shares of Common Stock (as defined in the Warrants) in the aggregate equal to the quotient derived by dividing (i) 1.5% times the aggregate principal amount of the Term B Loans funded by the Lenders by (ii) the applicable Warrant Price (as defined in such Warrants), rounded to the nearest whole share, and (ii) a customary legal opinion of counsel to Borrower and each Guarantor, in each case dated as of the date of such draw;

(e) no Event of Default or an event that with the passage of time could result in an Event of Default, shall exist; and

(f) payment of the fees and Lenders' Expenses then due as specified in Section 2.4 hereof (including payment of the fees then due and payable under the terms of the Fee Letter).

3.3 Covenant to Deliver. Each Loan Party agrees to deliver to Collateral Agent and the Lenders each item required to be delivered to Collateral Agent under this Agreement as a condition precedent to any Term Loan. Each Loan Party expressly agrees that a Term Loan made prior to the receipt by Collateral Agent or any Lender of any such item shall not constitute a waiver by Collateral Agent or any Lender of any Loan Party's obligation to deliver such item, and any such Term Loan in the absence of a required item shall be made in each Lender's sole discretion.

3.4 Procedures for Borrowing After the Effective Date. Subject to the prior or concurrent satisfaction of all other applicable conditions to the making of a Term Loan after the Effective Date set forth in Sections 2.2(a)(ii)(A), 3.2 and 3.3, to obtain a Term Loan (other than the Term Loan funded on the Effective Date), Borrower shall notify the Lenders (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 12:00 noon New York time three (3) Business Days prior to the date the applicable Term Loan is to be made. Together with any such electronic, facsimile or telephonic notification, Borrower shall deliver to Collateral Agent by electronic mail or facsimile a completed Loan Payment Request Form executed by a Responsible Officer or his or her designee. The Collateral Agent may rely on any telephone notice given by a person whom Collateral Agent reasonably believes is a Responsible Officer or designee.

3.5 Post-Closing Obligations. Notwithstanding any provision herein or in any other Loan Document to the contrary, to the extent not actually delivered on or prior to the Effective Date, each applicable Loan Party shall:

(a) no later than March 20, 2022 (or such later date as may be agreed by the Collateral Agent in its sole discretion), deliver insurance endorsements required pursuant to Section 6.5;

(b) no later than April 4, 2022 (or such later date as may be agreed by the Collateral Agent in its sole discretion), deliver landlord waivers with respect to the Loan Parties' locations at (i) 100 Domain Drive, Exeter, NH 08833, (ii) Newroads Distribution 251 Calef Highway, Lee NH 03861 and (iii) 18 Independence Drive, Devens, MA 01434;

(c) no later than April 4, 2022 (or such later date as may be agreed by the Collateral Agent in its sole discretion), enter into Control Agreements with respect to Collateral Accounts of HGE and Vapotherm Services maintained at Bank of America, N.A and the Collateral Accounts of the Borrower maintained at American Express Bank; *provided that* prior to the execution of Control Agreements with respect to such Collateral Accounts the amounts in such accounts shall not exceed One Million Dollars ($1,000,000.00) in the aggregate at any one time;

(d) no later than March 20, 2022 (or such later date as may be agreed by the Collateral Agent in its sole discretion) cause the trademarks owned by Pulmonary Care Innovations, PLLC to be transferred to a Loan Party; and

(e) no later than February 28, 2022 (or such later date as may be agreed by the Collateral Agent in its sole discretion) cause the original stock certificate and stock power of Solus Medical Limited to be delivered to the Collateral Agent.

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Each Loan Party hereby grants Collateral Agent, for the ratable benefit of the Secured Parties, to secure the payment and performance when due in full of all of the Obligations, a continuing first priority (subject, in respect of priority, to Permitted Liens that, under applicable law, have priority over Collateral Agent's Lien) security interest in, and pledges to Collateral Agent, for the ratable benefit of the Secured Parties, such Loan Party's right, title and interest in and to the Collateral of such Loan Party, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products and supporting obligations (as defined in the Code) in respect thereof. If a Loan Party shall acquire any commercial tort claim (as defined in the Code) for claims in excess of One Hundred Fifty Thousand Dollars ($150,000.00), such Loan Party shall grant to Collateral Agent, for the ratable benefit of the Secured Parties, a first priority security interest (subject, in respect of priority, to Permitted Liens that, under applicable law, have priority over Collateral Agent's Lien) therein and in the proceeds and products and supporting obligations (as defined in the Code) thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Collateral Agent.

On the Termination Date, Collateral Agent shall, at the sole cost and expense of Borrower, release its Liens in the Collateral. In addition, in the event that any Collateral is disposed of in accordance with Section 7.1 (other than a disposition to the Borrower or a Guarantor), Collateral Agent shall, at the time of such disposition and at the sole cost and expense of Borrower, release its Liens in such Collateral.

4.2 Authorization to File Financing Statements. Borrower and each Guarantor hereby authorize Collateral Agent to file financing statements or take any other action required to perfect Collateral Agent's security interests in the Collateral (held for the ratable benefit of the Secured Parties), without notice to any Loan Party, with all appropriate jurisdictions to perfect or protect Collateral Agent's interest or rights under the Loan Documents. Such financing statements may include an indication that the financing statement covers "all assets or all personal property" of such Loan Party in accordance with Section 9-504 of the Code.

5. REPRESENTATIONS AND WARRANTIES

Each Loan Party represents and warrants to Collateral Agent and the Lenders as follows:

5.1 Due Organization, Authorization: Power and Authority. Borrower and each of its Subsidiaries is duly existing and in good standing in its jurisdictions of organization or formation and Borrower and each of its Subsidiaries is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its businesses or its ownership of property requires that it be so qualified, except where the failure to do so could not reasonably be expected to have a Material Adverse Change. In connection with the execution of this Agreement, Borrower and each Guarantor has delivered to Collateral Agent a completed perfection on the Effective Date (each a "**Perfection Certificate**" and collectively, the "**Perfection Certificates**"). Each Loan Party represents and warrants that, (a) as of the Effective Date, all the information set forth on the Perfection Certificates delivered on the Effective Date pertaining to Borrower and each Guarantor is accurate and complete other than any immaterial ministerial information and (b) as of the date any financial statements specified in Section 6.2(a)(i) are delivered to the Collateral Agent for the months of March, June, September and December, all the information set forth on the Perfection Certificates delivered on such date pertaining to Borrower and each Guarantor is accurate and complete other than any immaterial ministerial information.

The execution, delivery and performance by Borrower and each of its Subsidiaries of the Loan Documents to which it is, or they are, a party have been duly authorized, and do not (i) conflict with any of Borrower's or such Subsidiaries' organizational documents, including its respective Operating Documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law applicable thereto, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or such Subsidiary, or any of their property or assets may be bound or affected where such contravention, conflict or violation would materially and adversely effect the Borrower's or such Subsidiaries obligations hereunder, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except (a) for any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority which have already been made or obtained and are in full force and effect or (b) any filings or recordings with respect to perfecting the Liens granted to the Collateral Agent under the Loan Documents), or (v) constitute an event of default under any Material Agreement by which Borrower, any of its Subsidiaries or any of their respective properties, is bound. Neither Borrower nor any of its Subsidiaries is in default under any agreement to which it is a party or by which it or any of its assets is bound in which such default could reasonably be expected to have a Material Adverse Change.

5.2 Collateral.

(a) Borrower and each Guarantor have good title to, have rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien under the Loan Documents, free and clear of any and all Liens except Permitted Liens, and neither Borrower nor any Guarantor has any Collateral Account that would violate the terms and provisions of Section 6.6.

(b) The security interest granted herein is and shall at all times continue to be a first priority (subject, in respect of priority, to Permitted Liens that, under applicable law, have priority over Collateral Agent's Lien) perfected security interest in the Collateral, except to the extent perfection thereof is expressly not required pursuant to the terms of the Loan Documents; provided that (subject to Permitted Liens) no other party shall have a perfected security interest in such Collateral.

(c) On the Effective Date, and except as disclosed on the Perfection Certificate (i) the Collateral is not in the possession of any third party bailee, and (ii) no such third party bailee possesses components of the Collateral in excess of Five Hundred Thousand Dollars ($500,000.00).

(d) All Inventory and Equipment is in all material respects of good and marketable quality, free from material defects.

(e) Borrower and each of its Subsidiaries is the sole owner of the Intellectual Property each respectively purports to own, free and clear of all Liens other than Permitted Liens.

(f) To the Knowledge of the Loan Parties, none of Borrower or any of its Subsidiaries has used any software or other materials that are subject to an open-source or similar license (including the General Public License, Lesser General Public License, Mozilla Public License, or Affero License) (collectively, "Open Source Licenses") in a manner that would cause any software or other materials owned by any Loan Party or used in any Loan Party's products to have to be (i) distributed to third parties at no charge or a minimal charge, (ii) licensed to third parties for the purpose of creating modifications or derivative works or (iii) subject to the terms of such Open Source License.

5.3 Litigation. Except as disclosed on the Perfection Certificate or pursuant to Section 6.2(a)(xviii), there are no actions, suits, investigations, or proceedings pending or, to the Knowledge of the Responsible Officers, threatened in writing by or against Borrower or any of its Subsidiaries involving more than Five Hundred Thousand Dollars ($500,000.00).

5.4 No Material Adverse Change; Financial Statements. All consolidated financial statements for Borrower and its consolidated Subsidiaries, delivered to Collateral Agent fairly present, in conformity with GAAP, and in all material respects the consolidated financial condition of Borrower and its consolidated Subsidiaries, and the consolidated results of operations of Borrower and its consolidated Subsidiaries. Since December 31, 2020, there has not been a Material Adverse Change.

5.5 Solvency. Borrower is Solvent. Borrower and each of its Subsidiaries, when taken as a whole, are Solvent.

5.6 Regulatory Compliance. Neither Borrower nor any of its Subsidiaries is an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Neither Borrower nor any of its Subsidiaries is engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower and each of its Subsidiaries has complied in all respects with the Federal Fair Labor Standards Act, except to the extent such non-compliance could not reasonably be expected to have a Material Adverse Change. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Neither Borrower nor any of its Subsidiaries has violated any laws, ordinances or rules, the violation of which could reasonably be expected to have a Material Adverse Change. Neither Borrower's nor any of its Subsidiaries' owned real properties or assets have been used by Borrower or such Subsidiary or, to any Loan Party's Knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than in material compliance with applicable laws. Borrower and each of its Subsidiaries has obtained all material consents, approvals and authorizations of, made all material declarations or filings with, and given all material notices to, all Governmental Authorities that are necessary to continue their respective businesses as currently conducted.

None of Borrower, any of its Subsidiaries, or to the knowledge of any Responsible Officer of the Borrower, any of Borrower's or its Subsidiaries' controlled Affiliates or any of their respective agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement is (i) in violation of any Anti-Terrorism Law, (ii) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law, or (iii) is a Blocked Person. None of Borrower, any of its Subsidiaries, or to the Knowledge of the Borrower, any of Borrower's or its Subsidiaries' controlled Affiliates or agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement, (x) conducts any business or engages in making or receiving any contribution of

funds, goods or services to or for the benefit of any Blocked Person, or (y) deals in, or otherwise engages in any transaction relating to, any property or interest in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law.

5.7 Investments. Neither Borrower nor any of its Subsidiaries owns any stock, shares, partnership interests or other equity securities except for Permitted Investments.

5.8 Tax Returns and Payments; Pension Contributions. Borrower and each of its Subsidiaries have timely filed all required Tax returns and reports, and Borrower and each of its Subsidiaries, have timely paid all foreign, federal and state, and all material local, Taxes owed by Borrower and such Subsidiaries in an amount greater than Two Hundred Thousand Dollars ($200,000.00), in all jurisdictions in which Borrower or any such Subsidiary is subject to Taxes, including the United States, unless such Taxes are being contested in accordance with the next sentence. Borrower and each of its Subsidiaries, may defer payment of any contested Taxes, provided that Borrower or such Subsidiary, (a) in good faith contests its obligation to pay the Taxes by appropriate proceedings promptly and diligently instituted and conducted; and (b) maintains adequate reserves or other appropriate provisions on its books in accordance with GAAP. Neither Borrower nor any of its Subsidiaries has knowledge of any claims or adjustments proposed for any of Borrower's or such Subsidiaries' prior Tax years which could result in additional Taxes becoming due and payable by Borrower or its Subsidiaries. Borrower and each of its Subsidiaries has paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and neither Borrower nor any of its Subsidiaries has, withdrawn from participation in, has permitted partial or complete termination of, or has permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any material liability of Borrower or its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

5.9 Use of Proceeds. Borrower shall use the proceeds of the Term Loans to repay the Existing Credit Facilities, to finance working capital and for general corporate purposes, and not for personal, family, household or agricultural purposes.

5.10 Full Disclosure. No written representation, warranty or other statement of Borrower or any of its Subsidiaries in any certificate or written statement, when taken as a whole, given to Collateral Agent or any Lender, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given to Collateral Agent or any Lender, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not misleading (it being recognized that projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

6. AFFIRMATIVE COVENANTS

Until the Termination Date, Borrower shall, and shall cause each of its Subsidiaries to, do all of the following:

6.1 Government Compliance.

(a) Other than specifically permitted hereunder, maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of organization and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Change. Comply with all laws, ordinances and regulations to which Borrower or any of its Subsidiaries is subject, the noncompliance with which could reasonably be expected to have a Material Adverse Change.

(b) Obtain and keep in full force and effect, all of the material Governmental Approvals necessary for the performance by Borrower and its Subsidiaries of their respective businesses and obligations under the Loan Documents and the grant of a security interest to Collateral Agent for the ratable benefit of the Secured Parties, in all of the Collateral.

6.2 Financial Statements, Reports, Certificates; Notices.

(a) Deliver to Collateral Agent and each Lender:

(i) no later than thirty (30) days after the last day of each month, a company-prepared consolidated balance sheet and income statement of the Borrower and its consolidated Subsidiaries for such month certified by a Responsible Officer and in a form reasonably acceptable to the Collateral Agent;

(ii) as soon as available, but no later than ninety (90) days after the last day of Borrower's fiscal year or within five (5) days of filing of the same with the SEC, audited consolidated financial statements covering the consolidated operations of Borrower and its consolidated Subsidiaries for such fiscal year, prepared under GAAP, consistently applied, together with an Unqualified Opinion on the financial statements;

(iii) after approval thereof by Borrower's board of directors, but no later than the earlier of (x) ten (10) days' after such approval and (y) February 28 of each year, Borrower's annual financial projections for the entire current fiscal year as approved by Borrower's board of directors; provided that, any revisions to such projections approved by Borrower's board of directors shall be delivered to Collateral Agent and the Lenders no later than seven (7) days after such approval;

(iv) within five (5) days of delivery, copies of all non-ministerial statements, reports and notices made available to Borrower's security holders (other than materials provided to members of the Borrower's board of directors solely in their capacities as security holder and other than materials subject to confidentiality arrangements which preclude the Borrower to so deliver any such materials);

(v) within five (5) days of filing, all reports of the Borrower on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission; provided that documents required to be delivered pursuant to this Section 6.2(a)(v) shall be deemed to have been delivered on the date on which such documents are posted at www.sec.gov; provided that the Borrower shall notify the Collateral Agent (which may be by email) each time any information is delivered by posting thereto;

(vi) prompt notice (and in any event within five (5) Business Days) of any amendments of or other changes to the respective Operating Documents of Borrower or any of the Guarantors, in each case together with any copies reflecting such amendments or changes with respect thereto;

(vii) no later than thirty (30) days after the last day of each month, copies of the month-end account statements for each Collateral Account maintained by Borrower or any Guarantor, which statements may be provided to Collateral Agent and each Lender by any Loan Party or directly from the applicable institution(s);

(viii) prompt delivery of (and in any event within five (5) days after the same are sent or received) copies of all material correspondence, reports, documents and other filings with any Governmental Authority that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals material to any Loan Party's business or that otherwise could reasonably be expected to have a Material Adverse Change;

(ix) prompt notice (and in any event, with respect to clause (A), within five (5) Business Days) of any event that (A) could reasonably be expected to materially and adversely affect the value of the Intellectual Property or (B) could reasonably be expected to result in a Material Adverse Change;

(x) written notice delivered at least ten (10) days' (or such shorter period agreed to by the Collateral Agent) prior to any Loan Party's creation of a New Subsidiary in accordance with the terms of Section 6.10);

(xi) written notice delivered at least thirty (30) days' (or such shorter period agreed to by the Collateral Agent) prior to Borrower's or any Guarantor's (A) adding any new offices or business locations, including warehouses (unless such new offices or business locations contain less than Five Hundred Thousand Dollars ($500,000.00) in assets or property of Borrower or any of the Guarantors), (B) changing its respective jurisdiction of organization, (C) changing its organizational structure or type, (D) changing its respective legal name, or (E) changing any organizational number(s) (if any) assigned by its respective jurisdiction of organization;

(xii) upon any Loan Party becoming aware of the existence of any Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default, prompt (and in any event within three (3) Business Days) written notice of such occurrence, which such notice shall include a reasonably detailed description of such Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default, and Borrower's proposal regarding how to cure such Event of Default or event;

(xiii) prompt (and in any event within three (3) Business Days) notice if Borrower or any Subsidiary of Borrower has Knowledge that Borrower, or any Subsidiary or controlled Affiliate of Borrower, is listed on the OFAC Lists or (a) is convicted on, (b) pleads nolo contendere to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering;

(xiv) concurrently with the delivery of any updated Perfection Certificate pursuant to Section 6.2(c), written notice of any commercial tort claim (as defined in the Code) or letter of credit rights (as defined in the Code) held by Borrower or any Guarantor and not previously disclosed to the Collateral Agent, in each case in an amount greater than One Hundred and Fifty Thousand Dollars ($150,000.00), and of the general details thereof;

(xv) if Borrower or any Guarantor is not now a Registered Organization but later becomes one, written notice of such occurrence and information regarding such Person's organizational identification number within seven (7) Business Days of receiving such organizational identification number;

(xvi) prompt (and in any event within three (3) Business Days) delivery of copies of any Material Agreement or any material amendment to, material modification of, termination of or material waiver under any Material Agreement;

(xvii) written notice delivered within ten (10) days of any Key Person ceasing to be actively engaged in the management of Borrower;

(xviii) prompt (and in any event within 10 days) written notice of any litigation or governmental proceedings pending or, to the knowledge of the Responsible Officers, threatened (in writing) against Borrower or any of its Subsidiaries, which could reasonably be expected to result in damages or costs to Borrower or any of its Subsidiaries of more than Five Hundred Thousand Dollars ($500,000.00);

(xix) prompt (and in any event within 10 days) written notice of all returns, recoveries, disputes and claims regarding Inventory that involve more than Six Hundred Thousand Dollars ($600,000.00) individually or in the aggregate in any calendar year; and

(xx) other information relating to the Borrower and its Subsidiaries as reasonably requested by Collateral Agent or any Lender; provided, that neither the Borrower nor any of its Subsidiaries will, pursuant to this Section 6.2(a)(xx) or Sections 6.2(d) or 6.8, be required to disclose or permit the inspection or discussion of, any document, information or other matter (A) except to the extent reasonably necessary in order to realize upon any of the Collateral as part of an exercise of remedies under this Agreement or the other Loan Documents following the occurrence and during the continuance of an Event of Default, information constituting material trade secrets to the extent not materially relevant to the credit analysis of the Borrower and its Subsidiaries and to the extent the disclosure of such trade secrets would be materially harmful to the business of the Borrower and its Subsidiaries, or (B) that is subject to attorney-client privilege (or similar legally-recognized privilege that would be lost by virtue of such disclosure to the Collateral Agent and Lenders) or constitutes attorney work product.

(b) Concurrently with the delivery of the financial statements specified in Section 6.2(a) above but no later than thirty (30) days after the last day of each month, deliver to Collateral Agent and each Lender:

(i) a duly completed Compliance Certificate signed by a Responsible Officer;

(ii) copies of any material Governmental Approvals obtained by Borrower or any of its Subsidiaries during such month; and

(iii) written notice of the commencement of, and any material development in, the proceedings contemplated by Section 5.8(a) during such month.

(c) Concurrently with the delivery of the financial statements specified in Section 6.2(a) above for March, June, September and December but no later than thirty (30) days after the last day of each such month, deliver to the Collateral Agent an updated Perfection Certificate to reflect any amendments, modifications and updates, if any, to in the information set forth in the Perfection Certificate after the Effective Date.

(d) Keep proper, complete and true books of record and account in accordance with GAAP in all material respects. Borrower shall, and shall cause each of its Subsidiaries to, allow, at the sole cost of Borrower, Collateral Agent or any Lender, during regular business hours upon reasonable prior notice (provided that no notice shall be required when an Event of Default has occurred and is continuing), to visit and inspect any of its properties, to examine and make abstracts or copies from any of its books and records, and to conduct a collateral audit and analysis of its operations and the Collateral. Such audits shall be conducted no more often than twice every year unless (and more frequently if) an Event of Default has occurred and is continuing.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition in all material respects, free from material defects. Returns and allowances between Borrower, or any of its Subsidiaries, as applicable, and their respective Account Debtors shall follow in all material respects Borrower's, or such Subsidiary's, customary practices in the ordinary course of business.

6.4 Taxes; Pensions. Timely file and require each of its Subsidiaries to timely file, all required Tax returns and reports and timely pay, and require each of its Subsidiaries to timely pay, all foreign, federal and state Taxes, and all material local Taxes, assessments, deposits and contributions owed by Borrower or its Subsidiaries, except as otherwise permitted pursuant to the terms of Section 5.8 hereof; deliver to Collateral Agent and the Lenders, on demand, appropriate certificates attesting to such payments; and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with the terms of such plans.

6.5 Insurance. Keep Borrower's and its Subsidiaries' business and the Collateral insured for risks and in amounts standard for companies in Borrower's and its Subsidiaries' industry and location. Insurance policies shall be in a form, with companies, and in amounts that are customary for companies in Borrower's and its Subsidiary industry and location. All property policies shall have a lender's loss payable endorsement showing Collateral Agent as lender loss payee or shall have an endorsement that recognizes the Collateral Agent as a lender loss payee if required by a written contract and such property policies shall waive subrogation against Collateral Agent. All liability policies shall show, or have endorsements showing, Collateral Agent (for the ratable benefit of the Secured Parties), as additional insured, or shall have an endorsement that recognizes the Collateral Agent (for the ratable benefit of the Secured Parties) as additional insured if required by a written contract. The Collateral Agent shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral, and each provider of any such insurance shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to the Collateral Agent, that it will give the Collateral Agent thirty (30) days (ten (10) days for non-payment of premiums) prior written notice before any such policy or policies shall be materially altered in a manner adverse to the Borrower and its Subsidiaries or canceled; provided that in the event such provider does not agree to give notice of material alteration, Borrower shall give Collateral Agent such 30 days' prior notice. At Collateral Agent's request, Borrower shall deliver to the Collateral Agent certified copies of policies and evidence of all premium payments. Subject to the immediately preceding sentence, proceeds payable under any policy shall, at Collateral Agent's option, be payable to Collateral Agent, for the ratable benefit of the Secured Parties, on account of the then-outstanding Obligations. Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy within one hundred

and eighty (180) days of receipt thereof (as may be extended by one hundred and eighty (180) days if a binding commitment has been entered into for the application thereof), toward the replacement or repair of destroyed or damaged property; provided that any such replacement or repaired property shall, to the extent such destroyed or damaged property constituted Collateral, be deemed Collateral in which Collateral Agent has been granted a first priority (subject, in respect of priority, to Permitted Liens that, under applicable law, have priority over Collateral Agent's Lien) security interest, and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Collateral Agent, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. If Borrower or any of its Subsidiaries fails to obtain insurance as required under this Section 6.5 or to pay any premium or other amounts due and payable with respect to such insurance, Collateral Agent and/or any Lender may (but has no obligation to do so), at Borrower's expense, make all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Collateral Agent or such Lender deems prudent.

6.6 Operating Accounts.

(a) Maintain Borrower's and Guarantors Collateral Accounts with depositary institutions that have agreed to execute Control Agreements in favor of Collateral Agent with respect to such Collateral Accounts. The provisions of the previous sentence shall not apply to Deposit Accounts, Securities Accounts and/or Commodities Accounts (w) that only contain cash collateral securing letters of credit, in each case, to the extent permitted by clause (k) of the definition of "Permitted Liens", (x) exclusively used for payroll, (y) exclusively used for payroll Taxes and other employee wage and benefit payments to or for the benefit of Borrower's, or any Subsidiaries, employees, in each case of clauses (x) and (y) so long as the amounts in such accounts do not exceed amounts reasonably determined by the Borrower to be necessary to pay such obligations for the immediately following payment cycle and (z) other Deposit Accounts, Securities Accounts and/or Commodities Accounts so long as the amounts in such other accounts do not exceed One Hundred Thousand Dollars ($100,000.00) in the aggregate at any one time (the foregoing accounts identified in clauses (w), (x),(y) and (z), collectively the "**Excluded Accounts**").

(b) Borrower shall provide Collateral Agent ten (10) days' prior written notice before Borrower or any Guarantor establishes any Collateral Account. In addition, for each Collateral Account that Borrower or any Guarantor, at any time maintains, Borrower or such Guarantor shall cause the applicable bank or financial institution at or with which such Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Collateral Agent's Lien in such Collateral Account (held for the ratable benefit of the Secured Parties) in accordance with the terms hereunder prior to the establishment of such Collateral Account.

(c) Neither Borrower nor any Guarantor shall maintain any Collateral Accounts except Collateral Accounts maintained in accordance with this Section 6.6.

(d) Neither the Collateral Agent nor any Lender shall deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement, in each case, unless an Event of Default has occurred and is continuing.

6.7 Protection of Intellectual Property Rights. Borrower and each of its Subsidiaries shall: (a) protect, defend and maintain the validity and enforceability of its respective Intellectual Property in a prudent business manner; (b) promptly advise Collateral Agent in writing of material infringement by a third party of its respective Intellectual Property that is material to its business; and (c) not allow any of its respective Intellectual Property material to its respective business to be abandoned, forfeited or dedicated to the public without Collateral Agent's prior written consent.

6.8 Litigation Cooperation. Make available to Collateral Agent and the Lenders, without expense to Collateral Agent or the Lenders, each Loan Party and each of each Loan Party's officers, employees and agents and Borrower's Books, to the extent that Collateral Agent or any Lender may reasonably deem them necessary to prosecute or defend any third-party suit or proceeding (excluding, for the avoidance of doubt, any suit or proceeding commenced by the Borrower or any of its Subsidiaries) instituted by or against Collateral Agent or any Lender with respect to any Collateral or relating to any Loan Party.

6.9 Landlord Waivers; Bailee Waivers. In the event that Borrower or any Guarantor, after the Effective Date, intends to add any new offices or business locations, including warehouses, or otherwise store any portion of the Collateral with, or deliver any portion of the Collateral to, a bailee, in each case pursuant to Section 7.2, then, in the event that the Collateral at any new location is valued (based on book value) in excess of Five Hundred Thousand Dollars ($500,000.00) in the aggregate, at Collateral Agent's election, the Borrower shall cause such bailee or landlord, as applicable, to execute and deliver a bailee waiver or landlord waiver, as applicable, in form and substance reasonably satisfactory to Collateral Agent prior to the addition of any such new offices or business locations, or any such storage with or delivery to any such bailee, as the case may be.

6.10 Creation/Acquisition of Subsidiaries. In the event any Borrower or any Subsidiary of the Borrower creates or acquires any Subsidiary after the Effective Date, Borrower or such Subsidiary shall promptly notify the Collateral Agent of such creation or acquisition, and Borrower or such Subsidiary shall take all actions reasonably requested by the Collateral Agent to achieve any of the following with respect to such "**New Subsidiary**" (defined as a Subsidiary formed after the date hereof during the term of this Agreement): (i) to cause such New Subsidiary to become either a co-Borrower or Guarantor hereunder and to grant a security interest in the Collateral as security for the Obligations; and (ii) to grant and pledge to Collateral Agent a perfected security interest in 100% of the stock, units or other evidence of ownership held by Borrower or such its Subsidiaries of any such New Subsidiary.

6.11 Further Assurances. Execute any further instruments and take further action as Collateral Agent or any Lender reasonably requests to perfect or continue Collateral Agent's Lien in the Collateral or to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS

Borrower shall not, and shall not permit any of its Subsidiaries to, do any of the following prior to the Termination Date without the prior written consent of the Required Lenders:

7.1 Dispositions. Convey, sell, lease, transfer, assign, dispose of or license (collectively, "**Transfer**") all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn-out or obsolete Equipment; (c) in connection with Permitted Liens, Permitted Investments and Permitted Licenses; (d) of cash or Cash Equivalents pursuant to transactions not prohibited by this Agreement, including Permitted Liens; (e) of any assets by the Borrower or any of the Borrower's Subsidiaries to the Borrower or any Guarantor; (f) of the assets of a Subsidiary of the Borrower that is not a Guarantor to any other Subsidiary of the Borrower that is not a Guarantor; and (g) of any part of its business or property (other than Intellectual Property) so long as the value of such Transfers does not exceed One Hundred Thousand Dollars ($100,000.00) during any fiscal year.

7.2 Changes in Business, Ownership, or Business Locations. (a) Engage in any business other than the businesses engaged in by Borrower and its Subsidiaries as of the Effective Date or reasonably related thereto; (b) liquidate or dissolve; provided that any Subsidiary may be liquidated or dissolved so long all of the assets of such Subsidiary are disposed of pursuant to a Transfer permitted by Section 7.1, or (c) consummate any transaction or series of related transactions in which (A) the stockholders of Borrower who were not stockholders immediately prior to the first such transaction own more than 35% of the voting stock of Borrower immediately after giving effect to such transaction or related series of such transactions and (B) except as permitted by Section 7.1 or Section 7.3, any Subsidiary ceases to be a direct or indirect Wholly-Owned Subsidiary of the Borrower. Borrower shall not, and shall not permit any Guarantor to, without at least thirty (30) days' (or such shorter period agreed to by the Collateral Agent) prior written notice to Collateral Agent: (A) add any new offices or business locations, including warehouses (unless such new offices or business locations contain less than Five Hundred Thousand Dollars ($500,000.00) in assets or property of Borrower and the Guarantors); (B) change its respective jurisdiction of organization, (C) except as permitted by Section 7.3, change its respective organizational structure or type, (D) change its respective legal name, or (E) change any organizational number(s) (if any) assigned by its respective jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate with any other Person, or acquire all or substantially all of the capital stock or shares or any property of another Person, in each case including for the avoidance of doubt through a merger, purchase, in-licensing arrangement or any similar transaction, except (i) for acquisitions by the Borrower or any Guarantor of any assets of the Borrower or any of its Subsidiaries, (ii) for

acquisitions by any Subsidiary of the Borrower that is not a Guarantor of any assets of any other Subsidiary of the Borrower that is not a Guarantor, (iii) for Permitted Acquisitions and (iv) so long as no Event of Default is occurring prior thereto or as a result therefrom, that a Subsidiary of the Borrower may merge with the Borrower or any other Subsidiary of the Borrower (provided that, (a) if the Borrower is a party to any such merger, the Borrower shall be the surviving entity thereof and (b) if any Guarantor is a party to any such merger, a Guarantor (or, if the other party to such merger is the Borrower, the Borrower) shall be the surviving entity).

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, other than Permitted Indebtedness.

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, except for Permitted Liens, or permit any Collateral not to be subject to the first priority (subject, in respect of priority, to Permitted Liens that, under applicable law, have priority over Collateral Agent's Lien) security interest granted herein.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account of the Borrower or any Guarantor, except pursuant to the terms of Section 6.6 hereof.

7.7 Restricted Payments. (a) Declare or pay any dividends (other than dividends payable solely in capital stock) on account of, or make any other distribution or payment in respect of, or redeem, retire or purchase any shares of any class of capital stock of the Borrower or any Subsidiary now or hereafter outstanding (each, a "**Restricted Payment**"), except (i) for Restricted Payments made to the Borrower or any Guarantor (ii) for Restricted Payments made by any Subsidiary of the Borrower that is not a Guarantor to any other Subsidiary that is not a Guarantor, (iii) so long as no Event of Default exists or would result therefrom, for the making of Restricted Payments solely in the form of equity securities that do not constitute Indebtedness and (iii) for Restricted Payments consisting of the repurchase of equity securities pursuant to the terms of employee stock purchase plans, employee restricted stock agreements, stockholder rights plans, director or consultant stock option plans, or similar plans, provided such repurchases do not exceed Three Hundred and Fifty Thousand Dollars ($350,000.00) in the aggregate per fiscal year, (b) purchase, redeem, defease or prepay any principal of, premium, if any, interest or other amount payable in respect of any Indebtedness, other than (subject to the terms hereof) with respect to the Obligations prior to its scheduled due date, unless being replaced with Permitted Indebtedness, or (c) be a party to or bound by an agreement that restricts a Subsidiary from paying dividends or otherwise distributing property to any Loan Party (other than this Agreement).

7.8 Investments. Directly or indirectly make any Investment other than Permitted Investments.

7.9 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower or any of its Subsidiaries, except for (a) transactions that are in the ordinary course of Borrower's or such Subsidiary's business, upon fair and reasonable terms that are no less favorable to Borrower or such Subsidiary than would be obtained in an arm's length transaction with a non-affiliated Person, (b) equity investments by Borrower's investors in Borrower or its Subsidiaries, (c) transactions between and among the Borrower and the Guarantors and (d) transactions between and among the Borrower or any Guarantor, on the one hand, and any Subsidiary of the Borrower that is not a Guarantor on the other hand, to the extent such transaction is otherwise expressly permitted by any other provision of this Agreement and (e) transactions not otherwise prohibited hereunder between and among Subsidiaries of the Borrower that are not Guarantors.

7.10 [Reserved].

7.11 Compliance. (a) Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Term Loan for any purpose that would violate Regulations X, T and U of the Federal Reserve Board of Governors; (b) fail to meet the minimum funding requirements of ERISA; (c) permit a Reportable Event or Prohibited Transaction, each as defined in ERISA, to occur; (d) fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have a Material Adverse Change; or (e) withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension,

profit sharing and deferred compensation plan which could reasonably be expected to result in any material liability of Borrower or any of its Subsidiaries to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

7.12 Compliance with Anti-Terrorism Laws. Directly or indirectly, or permit any controlled Affiliate to directly or indirectly, enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Directly or indirectly, or permit any controlled Affiliate to directly or indirectly, knowingly (a) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (b) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 or any similar executive order or other Anti-Terrorism Law, or (c) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti-Terrorism Law.

7.13 Financial Covenant.

(a) *Minimum Net Product Revenue.* Permit Net Product Revenue, measured on the last day of each month (commencing with the month ending July 22, 2022) on a trailing six-month basis, to be lower than the Net Product Revenue set forth opposite the applicable month as provided on Schedule 7.13(a).

7.14 Material Agreements. Without the consent of Collateral Agent, materially amend a Material Agreement in a manner materially adverse to Collateral Agent.

7.15 Material Intellectual Property. Permit any Subsidiary that is not a Guarantor to own any material Intellectual Property or any Intellectual Property material to the operation of the Borrower's or any Guarantor's business.

8. EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an "**Event of Default**") under this Agreement:

8.1 Payment Default. Any Loan Party fails to (a) make any payment of principal or interest on any Term Loan on its due date, or (b) pay any other Obligation within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day grace period shall not apply to payments due on the Maturity Date or the date of acceleration pursuant to Section 9.1(a) hereof);

8.2 Covenant Default.

(a) Borrower or any of its Subsidiaries fails or neglects to perform any obligation in Sections 6.2 (Financial Statements, Reports, Certificates), 6.4 (Taxes), 6.5 (Insurance), 6.6 (Operating Accounts), 6.7 (Protection of Intellectual Property Rights), 6.10 (Creation/Acquisition of Subsidiaries)or any Loan Party violates any provision in Section 7; or

(b) Borrower, or any Guarantor, fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any other Loan Document to which such person is a party, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within fifteen (15) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the fifteen (15) day period or cannot after diligent attempts by Borrower or such Guarantor, as applicable, be cured within such fifteen (15) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Term Loans shall be made during such cure period);

8.3 Material Adverse Change. An event or circumstance has occurred which would reasonably be expected to have a Material Adverse Change.

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or any of its Subsidiaries on deposit with any institution at which Borrower or any of its Subsidiaries maintains a Collateral Account, or (ii) a notice of lien, levy, or assessment (other than Permitted Lien) is filed against Borrower or any of its Subsidiaries or their respective assets by any government agency, and the same under subclauses (i) and (ii) of this clause (a) are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); and

(b) (i) any material portion of Borrower's or any of its Subsidiaries' assets is attached, seized, levied on, or comes into possession of a trustee or receiver, and such attachment, seizure, levy, writ or warrant has not been removed, discharged or rescinded within ten (10) days or (ii) any court order enjoins, restrains, or prevents Borrower or any of its Subsidiaries from conducting all or a material portion of its business affairs;

8.5 Insolvency. (a) Borrower and its Subsidiaries, on a consolidated basis, are or become Insolvent; (b) Borrower or any of its Subsidiaries begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower or any of its Subsidiaries and not dismissed or stayed within forty-five (45) days (but no Term Loans shall be extended while Borrower and its Subsidiaries, on a consolidated basis, are Insolvent and/or until any Insolvency Proceeding is dismissed);

8.6 Other Agreements. There is a default in (a) any agreement relating to Indebtedness to which Borrower or any of its Subsidiaries is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of Five Hundred Thousand Dollars ($500,000.00) or (b) there is any default under a Material Agreement in which the default could reasonably be expected to have a Material Adverse Change;

8.7 Judgments. One or more judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least Five Hundred Thousand Dollars ($500,000.00) (not covered by independent third-party insurance as to which (a) Borrower reasonably believes such insurance carrier will accept liability, (b) Borrower or the applicable Subsidiary has submitted such claim to such insurance carrier and (c) liability has not been rejected by such insurance carrier) shall be rendered against Borrower or any of its Subsidiaries and shall remain unsatisfied, unvacated, or unstayed for a period of ten (10) days after the entry thereof;

8.8 Misrepresentations. Borrower or any of its Subsidiaries makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Collateral Agent and/or the Lenders, and such representation, warranty, or other statement, when taken as a whole, is incorrect in any material respect when made;

8.9 [Reserved].

8.10 Guaranty. Any Guaranty terminates or ceases for any reason to be in full force and effect (other than in accordance with the terms thereof or hereof);

8.11 Governmental Approvals; FDA Action. (a) Any Governmental Approval shall have been revoked, rescinded, suspended, modified in an adverse manner, or not renewed in the ordinary course *and* such revocation, rescission, suspension, modification or non-renewal has resulted in or could reasonably be expected to result in a Material Adverse Change; or (b) (i) the FDA, DOJ or other Governmental Authority initiates a Regulatory Action against Borrower or any of its Subsidiaries or any supplier of Borrower or any of its Subsidiaries that causes Borrower or any of its Subsidiaries to recall, withdraw, remove or discontinue manufacturing, distributing, and/or marketing any of its products, even if such action is based on previously disclosed conduct and such recall, withdrawal, removal, or discontinuance could reasonably be expected to result in a Material Adverse Change; (ii) the FDA or any other comparable Governmental Authority issues a warning letter to Borrower or any of its Subsidiaries with respect

to any of its activities or products which could reasonably be expected to result in a Material Adverse Change; (iii) Borrower or any of its Subsidiaries conducts a mandatory or voluntary recall which could reasonably be expected to result in a Material Adverse Change; (iv) Borrower or any of its Subsidiaries enters into a settlement agreement with the FDA, DOJ or other Governmental Authority that could reasonably be expected to result in a Material Adverse Change, even if such settlement agreement is based on previously disclosed conduct; or (v) the FDA or any other comparable Governmental Authority revokes any authorization or permission granted under any Registration, or Borrower or any of its Subsidiaries withdraws any Registration, that could reasonably be expected to result in a Material Adverse Change.

8.12 Lien Priority. Except as the result of the action or inaction of the Collateral Agent or any Lender, any Lien created hereunder or by any other Loan Document shall at any time fail to constitute a valid and perfected first priority (subject, in respect of priority, to Permitted Liens that, under applicable law, have priority over Collateral Agent's Lien) Lien on a material portion of the Collateral purported to be secured by a perfected Lien.

9. RIGHTS AND REMEDIES

9.1 Rights and Remedies.

(a) Upon the occurrence and during the continuance of an Event of Default, Collateral Agent may, and at the written direction of Required Lenders shall, without notice or demand, do any or all of the following: (i) deliver notice of the Event of Default to Borrower, (ii) by notice to Borrower declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations shall be immediately due and payable without any action by Collateral Agent or the Lenders) or (iii) by notice to Borrower suspend or terminate the obligations, if any, of the Lenders to advance money or extend credit for any Loan Party's benefit under this Agreement or under any other Loan Document (but if an Event of Default described in Section 8.5 occurs all obligations, if any, of the Lenders to advance money or extend credit for any Loan Party's benefit under this Agreement or under any other Loan Document shall be immediately terminated without any action by Collateral Agent or the Lenders).

(b) Without limiting the rights of Collateral Agent and the Lenders set forth in Section 9.1(a) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right and at the written direction of the Required Lenders shall, without notice or demand, to do any or all of the following:

(i) foreclose upon and/or sell or otherwise liquidate, the Collateral;

(ii) make a demand for payment upon any Guarantor pursuant to the Guaranty delivered by such Guarantor;

(iii) apply to the Obligations any (A) balances and deposits of any Loan Party that Collateral Agent or any Lender holds or controls, (B) any amount held or controlled by Collateral Agent or any Lender owing to or for the credit or the account of any Loan Party, or (C) amounts received from any Guarantors in accordance with the respective Guaranty delivered by such Guarantor; and/or

(iv) commence and prosecute an Insolvency Proceeding or consent to any Loan Party commencing any Insolvency Proceeding.

(c) Without limiting the rights of Collateral Agent and the Lenders set forth in Sections 9.1(a) and (b) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right and at the written direction of the Required Lenders shall, without notice or demand, to do any or all of the following:

(i) settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Collateral Agent considers advisable, notify any Person owing any Loan Party money of Collateral Agent's security interest in such funds, and verify the amount of such account;

(ii) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its Liens in the Collateral (held for the ratable benefit of the Secured Parties). After the occurrence and during the continuance of an Event of Default, (x) each Loan Party shall assemble the Collateral if Collateral Agent requests and make it available at such location as Collateral Agent reasonably designates, (y) Collateral Agent may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which is prior or superior to its security interest and pay all expenses incurred and (z) each Loan Party grants Collateral Agent a license to enter and occupy any of its premises, without charge, to exercise any of Collateral Agent's rights or remedies;

(iii) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, and/or advertise for sale, any of the Collateral. After the occurrence and during the continuance of an Event of Default, Collateral Agent is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's and each of its Subsidiaries' labels, patents, copyrights, mask works, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Collateral Agent's exercise of its rights under this Section 9.1, Borrower's and each of its Subsidiaries' rights under all licenses and all franchise agreements inure to Collateral Agent, for the benefit of the Lenders;

(iv) place a "hold" on any Collateral Account maintained with Collateral Agent or any Lender or otherwise in respect of which a Control Agreement has been delivered in favor of Collateral Agent (for the ratable benefit of the Secured Parties) and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(v) demand and receive possession of Borrower's Books;

(vi) appoint a receiver to seize, manage and realize any of the Collateral, and such receiver shall have any right and authority as any competent court will grant or authorize in accordance with any applicable law, including any power or authority to manage the business of Borrower or any of its Subsidiaries; and

(vii) subject to clauses 9.1(a) and (b), exercise all rights and remedies available to Collateral Agent and each Lender under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof).

Notwithstanding any provision of this Section 9.1 to the contrary, upon the occurrence and during the continuance of any Event of Default, Collateral Agent shall have the right to exercise any and all remedies referenced in this Section 9.1 without the written consent of Required Lenders following the occurrence of an Exigent Circumstance.

9.2 Power of Attorney. Each Loan Party hereby irrevocably appoints Collateral Agent as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower's or any Guarantor's name on any checks or other forms of payment or security; (b) sign Borrower's or any Guarantor's name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts of Borrower or any Guarantor directly with the applicable Account Debtors, for amounts and on terms Collateral Agent determines reasonable; (d) make, settle, and adjust all claims under Borrower's or any Guarantor's insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, in each case that is prior or superior to its security interest (or otherwise take any action to terminate or discharge the same); and (f) transfer the Collateral into the name of Collateral Agent or a third party as the Code or any applicable law permits. Each Loan Party hereby appoints Collateral Agent as its lawful attorney-in-fact to sign Borrower's or any Guarantor's name on any documents necessary to perfect or continue the perfection of Collateral Agent's security interest in the Collateral regardless of whether an Event of Default has occurred until the Termination Date. Collateral Agent's foregoing appointment as Borrower's or any Guarantor's attorney in fact, and all of Collateral Agent's rights and powers thereunder, are coupled with an interest and are irrevocable until the Termination Date.

9.3 Protective Payments. If Borrower or any of its Subsidiaries fail to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount that could adversely affect the Collateral which Borrower or any of its Subsidiaries is obligated to pay under this Agreement or any other Loan Document, Collateral Agent may obtain such insurance or make such payment, and all amounts so paid by Collateral Agent are Lenders' Expenses and immediately due and payable, bearing interest at the Default Rate, and secured by the Collateral. Collateral Agent will make reasonable efforts to provide Borrower with notice of Collateral Agent obtaining such insurance or making such payment at the time it is obtained or paid or within a reasonable time thereafter. No such payments by Collateral Agent are deemed an agreement to make similar payments in the future or Collateral Agent's waiver of any Event of Default.

9.4 Application of Payments and Proceeds. Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence and during the continuance of an Event of Default, (a) each Loan Party irrevocably waives the right to direct the application of any and all payments at any time during the continuance of an Event of Default received by Collateral Agent from or on behalf of Borrower or any of its Subsidiaries of all or any part of the Obligations, and, as between any Loan Party on the one hand and Collateral Agent and Lenders on the other, Collateral Agent shall have the continuing and exclusive right to apply and to reapply any and all payments received against the Obligations in such manner as Collateral Agent may deem advisable notwithstanding any previous application by Collateral Agent, and (b) the proceeds of any sale of, or other realization upon all or any part of the Collateral by the Collateral Agent or any Lender will be applied: first, to the Lenders' Expenses; second, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the United States Bankruptcy Code, would have accrued on such amounts); third, to the principal amount of the Obligations outstanding; and fourth, to any other Obligations owing to Collateral Agent or any Lender under the Loan Documents. Any balance remaining shall be delivered to Borrower or to whoever may be lawfully entitled to receive such balance or as a court of competent jurisdiction may direct. In carrying out the foregoing, (x) amounts received shall be applied in the numerical order provided until exhausted prior to the application to the next succeeding category, and (y) each of the Persons entitled to receive a payment in any particular category shall receive an amount equal to its pro rata share of amounts available to be applied pursuant thereto for such category. Any reference in this Agreement to an allocation between or sharing by the Lenders of any right, interest or obligation "ratably," "proportionally" or in similar terms shall refer to the Lenders' Pro Rata Shares unless expressly provided otherwise. Collateral Agent, or if applicable, each Lender, shall promptly remit to the other Lenders such sums as may be necessary to ensure the ratable repayment of each Lender's Pro Rata Share of any Term Loan and the ratable distribution of interest, fees and reimbursements paid or made by any Loan Party. Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lenders also received their scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its Pro Rata Share of scheduled payments made on any date or dates, then such Lender shall remit to Collateral Agent or other Lenders such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Collateral Agent. If any payment or distribution of any kind or character, whether in cash, properties or securities, shall be received by a Lender in excess of its Pro Rata Share, then the portion of such payment or distribution in excess of such Lender's Pro Rata Share shall be received and held by such Lender in trust for and shall be promptly paid over to the other Lenders (in accordance with their respective Pro Rata Shares) for application to the payments of amounts due on such other Lenders' claims. To the extent any payment for the account of any Loan Party is required to be returned as a voidable transfer or otherwise, the Lenders shall contribute to one another as is necessary to ensure that such return of payment is on a pro rata basis. If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for the Secured Parties for purposes of perfecting Collateral Agent's security interest therein (held for the ratable benefit of the Secured Parties).

9.5 Liability for Collateral. So long as Collateral Agent and the Lenders comply with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Collateral Agent and the Lenders, Collateral Agent and the Lenders shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Each Loan Party bears all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Failure by Collateral Agent or any Lender, at any time or times, to require strict performance by any Loan Party of any provision of this Agreement or by any Loan Party of any other Loan Document shall not waive, affect, or diminish any right of Collateral Agent or any Lender thereafter

to demand strict performance and compliance herewith or therewith. Any waiver hereunder provided in accordance with Section 12.5 shall only be effective for the specific instance and purpose for which it is given. The rights and remedies of Collateral Agent and the Lenders under this Agreement and the other Loan Documents are cumulative. Collateral Agent and the Lenders have all rights and remedies provided under the Code, any applicable law, by law, or in equity. The exercise by Collateral Agent or any Lender of one right or remedy is not an election, and Collateral Agent's or any Lender's waiver of any Event of Default is not a continuing waiver. Collateral Agent's or any Lender's delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Each Loan Party waives, to the fullest extent permitted by law, demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Collateral Agent or any Lender on which Borrower or any Subsidiary is liable.

10. NOTICES

Other than as specifically provided herein, all notices, consents, requests, approvals, demands, or other communication (collectively, "**Communications**") by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by facsimile or e-mail transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, facsimile number, or email address indicated below. Any of Collateral Agent, Lender or Borrower may change its mailing address, facsimile number or e-mail address by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to any Loan Party:	VAPOTHERM, INC. 100 Domain Drive Exeter, NH 03833 Attn: John Landry, VP & CFO Fax: (603) 658-0181 Email: jlandry@vtherm.com
with a copy (which shall not constitute notice) to:	ROPES & GRAY LLP Prudential Tower, 800 Boylston Street Boston, MA 02199-3600 Attn: Kevin Jarboe Phone: (617) 951-7546 Email: kevin.jarboe@ropesgray.com
If to Collateral Agent:	SLR INVESTMENT CORP. 500 Park Avenue, 3rd Floor New York, NY 10022 Attention: Anthony Storino Fax: (212) 993-1698 Email: astorino@slrcp.com
with a copy (which shall not constitute notice) to:	LATHAM & WATKINS LLP 505 Montgomery Street, Suite 2000 San Francisco, CA 94111 Attention: Haim Zaltzman Facsimile: (415) 395-8095 Email: haim.zaltzman@lw.com

11. CHOICE OF LAW, VENUE AND JURY TRIAL WAIVER

11.1 Waiver of Jury Trial. EACH OF BORROWER, EACH GUARANTOR, COLLATERAL AGENT AND LENDERS UNCONDITIONALLY WAIVES ANY AND ALL RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, ANY OF THE OTHER LOAN DOCUMENTS, ANY OF THE INDEBTEDNESS SECURED HEREBY, ANY DEALINGS AMONG BORROWER, EACH GUARANTOR COLLATERAL AGENT AND/OR LENDERS RELATING TO THE SUBJECT MATTER OF THIS TRANSACTION OR ANY RELATED TRANSACTIONS, AND/OR THE RELATIONSHIP THAT IS BEING ESTABLISHED AMONG BORROWER, EACH GUARANTOR COLLATERAL AGENT AND/OR LENDERS. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT. THIS WAIVER IS IRREVOCABLE. THIS WAIVER MAY NOT BE MODIFIED EITHER ORALLY OR IN WRITING. THE WAIVER ALSO SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS TO THIS AGREEMENT, ANY OTHER LOAN DOCUMENTS, OR TO ANY OTHER DOCUMENTS OR AGREEMENTS RELATING TO THIS TRANSACTION OR ANY RELATED TRANSACTION. THIS AGREEMENT MAY BE FILED AS A WRITTEN CONSENT TO A TRIAL BY THE COURT.

11.2 Governing Law and Jurisdiction. THIS AGREEMENT AND THE OTHER LOAN DOCUMENTS (EXCLUDING THOSE LOAN DOCUMENTS THAT BY THEIR OWN TERMS ARE EXPRESSLY GOVERNED BY THE LAWS OF ANOTHER JURISDICTION) SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

11.3 Submission to Jurisdiction. Any legal action or proceeding with respect to the Loan Documents shall be brought exclusively in the courts of the State of New York located in the City of New York, Borough of Manhattan, or of the United States of America for the Southern District of New York and, by execution and delivery of this Agreement, each Loan Party, Collateral Agent and the Lenders hereby accept for itself and in respect of each Loan Party's Property, generally and unconditionally, the jurisdiction of the aforesaid courts. Notwithstanding the foregoing, Collateral Agent and Lenders shall have the right to bring any action or proceeding against any Loan Party (or any property of any Loan Party) in the court of any other jurisdiction Collateral Agent or Lenders deem necessary or appropriate in order to realize on the Collateral or other security for the Obligations. The parties hereto hereby irrevocably waive any objection, including any objection to the laying of venue or based on the grounds of *forum non conveniens*, that any of them may now or hereafter have to the bringing of any such action or proceeding in such jurisdictions.

11.4 Service of Process. Each Loan Party irrevocably waives personal service of any and all legal process, summons, notices and other documents and other service of process of any kind and consents to such service in any suit, action or proceeding brought in the United States of America with respect to or otherwise arising out of or in connection with any Loan Document by any means permitted by applicable requirements of law, including by the mailing thereof (by registered or certified mail, postage prepaid) to the address of Borrower specified herein (and shall be effective when such mailing shall be effective, as provided therein). Each Loan Party agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

11.5 Non-exclusive Jurisdiction. Nothing contained in this Article 11 shall affect the right of Collateral Agent or Lenders to serve process in any other manner permitted by applicable requirements of law or commence legal proceedings or otherwise proceed against any Loan Party in any other jurisdiction.

12. GENERAL PROVISIONS

12.1 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. No Loan Party may transfer, pledge or assign this Agreement or any rights or obligations under it without Collateral Agent's prior written consent (which may be granted or withheld in Collateral Agent's discretion, subject to Section 12.5). The Lenders have the right, without the consent of or notice to any Loan Party unless otherwise provided herein, to sell, transfer, assign, pledge, negotiate, or grant participation in (any such sale, transfer, assignment, negotiation**,** or grant of a participation, a **"Lender Transfer")** all or any part of, or any

interest in, the Lenders' obligations, rights, and benefits under this Agreement and the other Loan Documents; *provided*, *however*, that any such Lender Transfer (other than (i) any Lender Transfer at any time that an Event of Default has occurred and is continuing, or (ii) a transfer, pledge, sale or assignment to an Eligible Assignee) of its obligations, rights, and benefits under this Agreement and the other Loan Documents shall require the prior written consent of the Collateral Agent (such approved assignee, an "**Approved Lender**"). Each Loan Party and Collateral Agent shall be entitled to continue to deal solely and directly with such Lender in connection with the interests so assigned until Collateral Agent shall have received and accepted an effective assignment agreement in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee or Approved Lender as Collateral Agent reasonably shall require. Notwithstanding anything to the contrary contained herein, so long as no Event of Default arising has occurred and is continuing, no Lender Transfer (other than a Lender Transfer in connection with (x) assignments by a Lender due to a forced divestiture at the request of any regulatory agency having authority over the applicable Lender; or (y) upon the occurrence of a default, event of default or similar occurrence with respect to a Lender's own financing or securitization transactions) shall be permitted, without any Loan Party's consent, to any Disqualified Institution at the time of such assignment. Collateral Agent, acting solely for this purpose as a non-fiduciary agent of the Loan Parties, shall maintain at one of its offices in the United States a copy of each such assignment agreement for the recordation of the names and addresses of each Lender, and the Term Loan Commitments of, and the principal amount and stated interest of the Term Loans owing each Lender pursuant to the terms hereof from time to time (the "**Register**"). The entries in the Register shall be conclusive absent manifest error, and each Loan Party, Collateral Agent and Lenders shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as Lender hereunder for all purposes of this Agreement. The Register shall be available for inspection by the Borrower at any reasonable time upon reasonable prior notice to the Collateral Agent. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Loan Parties, maintain a register on which it enters the name and address of each participant and the principal amounts (and stated interest) of each participant's interest in the Term Loans or other obligations under the Loan Documents (the "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any participant or any information relating to a participant's interest in any commitments, loans or its other obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such commitment, loan or other obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, Collateral Agent (in its capacity as Collateral Agent) shall have no responsibility for maintaining a Participant Register. Each Loan Party agrees that each participant shall be entitled to the benefits of the provisions in Exhibit I attached hereto (subject to the requirements and limitations therein, including the requirements under Section 7 of Exhibit I attached hereto (it being understood that the documentation required under Section 7 of Exhibit I attached hereto shall be delivered to the participating Lender)) to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to this Section 12.1; provided that such participant shall not be entitled to receive any greater payment under Exhibit I attached hereto, with respect to any participation, than its participating Lender would have been entitled to receive, except to the extent such entitlement to receive a greater payment results from a change in law that occurs after the participant acquired the applicable participation.

12.2 Indemnification. Each Loan Party agrees to indemnify, defend and hold each Secured Party and their respective directors, officers, employees, consultants, agents, attorneys, or any other Person affiliated with or representing such Secured Party (each, an "**Indemnified Person**") harmless against: (a) all obligations, demands, claims, and liabilities (collectively, "**Claims**") asserted by any other party in connection with; related to; following from; or arising from, out of or under, the transactions contemplated by the Loan Documents; and (b) all losses and Lenders' Expenses incurred, or paid by an Indemnified Person in connection with; related to; following from; or arising from, out of or under, the transactions contemplated by the Loan Documents (including reasonable and documented external attorneys' fees and expenses), except, in each case, for Claims losses and/or Lender Expenses directly caused by such Indemnified Person's gross negligence or willful misconduct. Each Loan Party hereby further agrees to indemnify, defend and hold each Indemnified Person harmless from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements of any kind or nature whatsoever (including the reasonable and documented fees and disbursements of external counsel for such Indemnified Person) in connection with any investigative, response, remedial, administrative or judicial matter or proceeding, whether or not such Indemnified Person shall be designated a party thereto and including any such

proceeding initiated by or on behalf of any Loan Party, and the reasonable and documented expenses of investigation by engineers, environmental consultants and similar technical personnel and any commission, fee or compensation claimed by any broker (other than any broker retained by Collateral Agent or Lenders) asserting any right to payment for the transactions contemplated hereby which may be imposed on, incurred by or asserted against such Indemnified Person as a result of or in connection with the transactions contemplated hereby and the use or intended use of the proceeds of the Term Loans, except for liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements directly caused by such Indemnified Person's gross negligence or willful misconduct. This Section 12.2 shall not apply with respect to any Taxes other than any Taxes that represent losses, claims, damages, etc., arising from any non-Tax claim.

12.3 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.4 Correction of Loan Documents. Notwithstanding anything to the contrary contained in Section 12.5, Collateral Agent and Borrower may, with prior notice to the Lenders, correct mistakes and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties**.**

12.5 Amendments in Writing; Integration. (a) Except as otherwise expressly provided herein, no amendment, modification, termination or waiver of any provision of this Agreement or any other Loan Document, no approval or consent thereunder, or any consent to any departure by Borrower or any of its Subsidiaries therefrom, shall in any event be effective unless the same shall be in writing and signed by Borrower, Collateral Agent and the Required Lenders provided that:

(i) no such amendment, waiver or other modification that would have the effect of increasing or reducing a Lender's Term Loan Commitment or Commitment Percentage shall be effective as to such Lender without such Lender's written consent;

(ii) no such amendment, waiver or modification that would affect the rights and duties of Collateral Agent shall be effective without Collateral Agent's written consent or signature; and

(iii) no such amendment, waiver or other modification shall, unless signed by all the Lenders directly affected thereby, (A) reduce the principal of, rate of interest (other than default interest) on or any fees with respect to any Term Loan or forgive any principal, interest (other than default interest) or fees (other than late charges) with respect to any Term Loan; (B) postpone the date fixed for, or waive, any payment of principal of any Term Loan or of interest on any Term Loan (other than default interest) or any fees provided for hereunder (other than late charges or for any termination of any commitment); (C) change the definition of the term "Required Lenders" or the percentage of Lenders which shall be required for the Lenders to take any action hereunder; (D) release all or substantially all of any material portion of the Collateral, authorize any Loan Party to sell or otherwise dispose of all or substantially all or any material portion of the Collateral or release any Guarantor of all or any portion of the Obligations or its Guaranty obligations with respect thereto, except, in each case with respect to this clause (D), as otherwise may be expressly permitted under this Agreement or the other Loan Documents (including in connection with any disposition permitted hereunder); (E) amend, waive or otherwise modify this Section 12.5 or the definitions of the terms used in this Section 12.5 insofar as the definitions affect the substance of this Section 12.5; (F) consent to the assignment, delegation or other transfer by any Loan Party of any of its rights and obligations under any Loan Document or release any Loan Party of its payment obligations under any Loan Document, except, in each case with respect to this clause (F), pursuant to a transaction expressly permitted pursuant to this Agreement; (G) amend any of the provisions of Section 9.4 or amend any of the definitions of Pro Rata Share, Term Loan Commitment, Commitment Percentage that provide for the Lenders to receive their Pro Rata Shares of any fees, payments, setoffs or proceeds of Collateral hereunder; or (H) subordinate the Liens granted in favor of Collateral Agent securing the Obligations (other than Liens permitted by clause (c) of the definition of "Permitted Liens"); or (I) amend any of the provisions of Section 12.7 and 12.8. It is hereby understood and agreed that all Lenders shall be deemed directly affected by an amendment, waiver or other modification of the type described in the preceding clauses (C), (D), (E), (F), (G) and (H) of the immediately preceding sentence.

(b) Other than as expressly provided for in Section 12.5(a)(i)-(iii), Collateral Agent may, at its discretion, or if requested by the Required Lenders, from time to time designate covenants in this Agreement less restrictive by notification to a representative of Borrower.

(c) This Agreement and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements with respect to such subject matter. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Agreement and the Loan Documents merge into this Agreement and the Loan Documents.

12.6 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement. Delivery of an executed counterpart of a signature page of this Agreement by facsimile, portable document format (.pdf) or other electronic transmission will be as effective as delivery of a manually executed counterpart hereof.

12.7 Survival. Except as otherwise provided in this Agreement, all covenants, representations and warranties made in this Agreement continue in full force and effect until the Termination Date. The obligation of the Loan Parties in Section 12.2 to indemnify each Lender and Collateral Agent, as well as the confidentiality provisions in Section 12.8 below, shall survive until the statute of limitations with respect to such claim or cause of action shall have run.

12.8 Confidentiality. In handling any confidential information of Borrower and its Subsidiaries, each of the Lenders and Collateral Agent shall hold such information confidential and shall exercise the same degree of care that it exercises for their own proprietary information, but disclosure of information may be made: (a) subject to the terms and conditions of this Agreement, including this Section 12.8, to the Lenders' and Collateral Agent's Subsidiaries, or in connection with a Lender's own financing or securitization transactions and upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; (b) to prospective transferees or purchasers (other than those identified in (a) above and Disqualified Institutions) of any interest in the Term Loans (provided, however, the Lenders and Collateral Agent shall obtain such prospective transferee's or purchaser's agreement to the terms of this provision or to similar confidentiality terms); (c) as required by law, rule, regulation, subpoena or other legal or administrative order; (d) as required or requested by any federal or state regulatory authority (including the Securities and Exchange Commission or other Governmental Authority having regulatory authority over such Lender or the Collateral Agent, as applicable) or any self-regulatory authority and any other public disclosure with investors or other related persons related to such required or requested disclosures with any regulatory or self-regulatory authority; (e) as Collateral Agent reasonably considers appropriate in exercising remedies under the Loan Documents or in connection with any examination or audit so long as such examiners or auditors are subject to confidentiality obligations customary for such examiners or auditors; (f) to third party service providers of the Lenders and/or Collateral Agent so long as such service providers have executed a confidentiality agreement or have agreed to similar confidentiality terms with the Lenders and/or Collateral Agent, as applicable, with terms no less restrictive than those contained herein; and (g) to any Person that is an investor of the Lenders and/or the Collateral Agent so long as such Person has executed a confidentiality agreement or has agreed to similar confidentiality terms with such Lender and/or the Collateral Agent, as applicable, with terms no less restrictive than those contained herein. Confidential information does not include information that either: (i) is in the public domain or in the Lenders' and/or Collateral Agent's possession when disclosed to the Lenders and/or Collateral Agent, or becomes part of the public domain after disclosure to the Lenders and/or Collateral Agent through no breach of this provision by the Lenders or the Collateral Agent; or (ii) is disclosed to the Lenders and/or Collateral Agent by a third party, if the Lenders and/or Collateral Agent does not know that the third party is prohibited from disclosing the information. Subject to the restrictions on disclosure set forth above, Collateral Agent and the Lenders may use confidential information for any purpose, including, without limitation, for the development of client databases, reporting purposes, and market analysis. The provisions of the immediately preceding sentence shall survive the termination of this Agreement. The agreements provided under this Section 12.8 supersede all prior agreements, understanding, representations, warranties, and negotiations between the parties about the subject matter of this Section 12.8.

12.9 Right of Set Off. Each Loan Party hereby grants to Collateral Agent and to each Lender, subject to the sentence immediately following, a right of set off as security for all Obligations to Secured Parties hereunder, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property of any Loan Party, now or hereafter in the possession, custody, safekeeping or control of any Secured Party or any entity under the control of such Secured Party (including a Collateral Agent Affiliate), or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, any Secured Party may, with the prior written consent of the Collateral Agent, set off the same or any part thereof and apply the same to any liability or obligation of any Loan Party even though unmatured and regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE COLLATERAL AGENT TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF ANY LOAN PARTY ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED BY EACH LOAN PARTY.

12.10 Cooperation of Loan Parties. If necessary, each Loan Party agrees to (i) execute any documents reasonably required to effectuate and acknowledge each assignment of a Term Loan Commitment (or portion thereof) or Term Loan (or portion thereof) to an assignee in accordance with Section 12.1, (ii) make any Loan Party's management personnel available to meet with Collateral Agent and prospective participants and assignees of Term Loan Commitments, the Term Loans or portions thereof (which meetings shall be conducted no more often than twice every twelve months unless an Event of Default has occurred and is continuing), and (iii) assist Collateral Agent and the Lenders in the preparation of information relating to the financial affairs of any Loan Party as any prospective participant or assignee of a Term Loan Commitment (or portions thereof) or Term Loan (or portions thereof) reasonably may request. Subject to the provisions of Section 12.8, each Loan Party authorizes each Lender to disclose to any prospective participant or assignee of a Term Loan Commitment (or portions thereof), any and all information in such Lender's possession concerning any Loan Party and its financial affairs which has been delivered to such Lender by or on behalf of any Loan Party pursuant to this Agreement, or which has been delivered to such Lender by or on behalf of any Loan Party in connection with such Lender's credit evaluation of any Loan Party prior to entering into this Agreement.

12.11 Tombstones / Public Announcement. Each Loan Party hereby consents to the publication by the Collateral Agent and each Lender of a tombstone or other comparable advertising material relating to the financing contemplated by this Agreement, provided that (i) the amount of the credit facilities herein is not so published, (ii) no information regarding any stockholders of the Borrower is included therein and (iii) the Borrower is provided a reasonable opportunity to review and comment on such tombstone or such other advertising material prior to publication thereof. In connection therewith, the Collateral Agent and the Lenders may use any Loan Party's legal name and logos.

12.12 Collateral Agent and Lender Agreement. Collateral Agent and the Lenders hereby agree to the terms and conditions set forth on Exhibit B attached hereto. Each Loan Party hereby acknowledges the terms and conditions set forth on Exhibit B attached hereto.

12.13 Time of Essence. Time is of the essence for the performance of Obligations under this Agreement.

12.14 [Reserved].

12.15 Electronic Execution of Certain Other Documents. The words "execution," "execute", "signed," "signature," and words of like import in or related to any document to be signed in connection with this Agreement and the transactions contemplated hereby (including without limitation assignments, assumptions, amendments, waivers and consents) shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Collateral Agent, or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

13. GUARANTY.

13.1 Guaranty. Each Guarantor hereby agrees that such Guarantor is jointly and severally liable for, and each Guarantor hereby absolutely and unconditionally guarantees to the Collateral Agent and the Lenders and their respective successors and assigns, the full and prompt payment when due (whether at stated maturity, by acceleration or otherwise) and performance of all Obligations owed or hereafter owing to the Collateral Agent and the Lenders by each other Loan Party. Each Guarantor agrees that its guaranty obligation hereunder is a continuing guaranty of payment and performance and not of collection, and that its obligations under this Section 13 shall be absolute and unconditional, irrespective of, and unaffected by:

(a) the genuineness, validity, regularity, enforceability or any future amendment of, or change in, this Agreement, any other Loan Document or any other agreement, document or instrument to which any Loan Party is or may become a party;

(b) the absence of any action to enforce this Agreement (including this Section 13) or any other Loan Document or the waiver or consent by the Collateral Agent and the Lenders with respect to any of the provisions thereof;

(c) the existence, value or condition of, or failure to perfect its Lien against, any security for the Obligations or any action, or the absence of any action, by the Collateral Agent and the Lenders in respect thereof (including the release of any such security);

(d) the insolvency of any Loan Party; or

(e) any other action or circumstances which otherwise constitute a legal or equitable discharge or defense of a surety or guarantor.

(f) Each Guarantor shall be regarded, and shall be in the same position, as principal debtor with respect to the Obligations guaranteed hereunder.

13.2 **Waivers by the Guarantors.** To the fullest extent permitted by Requirements of Law, each Guarantor expressly waives all rights it may have now or in the future under any statute, or at common law, or pursuant to any other laws or in equity, or otherwise, to compel the Collateral Agent or the Lenders to marshal assets or to proceed in respect of the Obligations guaranteed hereunder against any other Loan Party, any other party or against any security for the payment and performance of the Obligations before proceeding against, or as a condition to proceeding against, such Guarantor. It is agreed among each Guarantor, the Collateral Agent and the Lenders that the foregoing waivers are of the essence of the transaction contemplated by this Agreement and the other Loan Documents and that, but for the provisions of this Section 13 and such waivers, the Collateral Agent and the Lenders would decline to enter into this Agreement,

13.3 **Benefit of Guaranty.** Each Guarantor agrees that the provisions of this Section 13 are for the benefit of the Collateral Agent and the other Secured Parties and their respective successors, transferees, endorsees and assigns, and nothing herein contained shall impair, as between such Guarantor, on the one hand, and the Collateral Agent and the Lenders, on the other hand, the obligations of such other Guarantor under the Loan Documents.

13.4 **Subordination of Subrogation Etc.** Notwithstanding anything to the contrary in this Agreement or in any other Loan Document, and except as set forth in Section 13.7 or as needed to permit any Guarantor's cash management (including inter-company cash management) in the ordinary course of business, each Guarantor hereby expressly subordinates to the prior payment in full, in cash, of the Obligations (other than inchoate indemnity obligations, obligations arising under the Warrants and any other obligations which, by their terms, are to survive the termination of this Agreement) any and all rights pursuant to any laws or in equity to subrogation, reimbursement, exoneration, contribution, indemnification or set off and any and all defenses available to a surety, guarantor or accommodation co-obligor (other than defense of payment in full of the Obligations) until the Termination Date has occurred. Each Guarantor acknowledges and agrees that this subordination is intended to benefit the Collateral Agent and the Lenders and shall not limit or otherwise affect such Guarantor's liability hereunder or the enforceability of this Section 13, and that the Collateral Agent, the Lenders and their respective successors and assigns are intended third party beneficiaries of the waivers and agreements set forth in this Section 13.4.

13.5 **Election of Remedies.** If the Collateral Agent or any Lender may, under applicable law, proceed to realize its benefits under any of the Loan Documents giving the Collateral Agent or such Lender a Lien upon any Collateral, whether owned by any Loan Party or by any other Person, either by judicial foreclosure or by non-judicial sale or enforcement, the Collateral Agent or any Lender may, at its sole option, determine which of its remedies or rights it may pursue without affecting any of its rights and remedies under this Section 13. If, in the exercise of any of its rights and remedies, the Collateral Agent or any Lender shall forfeit any of its rights or remedies, including its right to enter a deficiency judgment against any Loan Party or any other Person, whether because of any applicable laws pertaining to "election of remedies" or the like, each Guarantor hereby consents to such action by the Collateral Agent or such Lender and waives any claim based upon such action, even if such action by the Collateral Agent or such Lender shall result in a full or partial loss of any rights of subrogation which each Guarantor might otherwise have had but for such action by the Collateral Agent or such Lender. Any election of remedies which results in the denial or impairment of the right of the Collateral Agent or any Lender to seek a deficiency judgment against any Guarantor shall not impair any other Guarantor's obligation to pay the full amount of the Obligations. In the event the Collateral Agent or any Lender shall bid at any foreclosure or trustee's sale or at any private sale permitted by law or the Loan Documents, the Collateral Agent (either directly or through one or more acquisition vehicles) or such Lender may offset the Obligations against the purchase price of such bid in lieu of accepting cash or other non-cash consideration in connection with such sale or other disposition. The amount of the successful bid at any such sale, whether the Collateral Agent, any Lender or any other party is the successful bidder, shall be conclusively deemed to be the fair and reasonably equivalent value of the Collateral and the difference between such bid amount and the remaining balance of the Obligations shall be conclusively deemed to be the amount of the Obligations guaranteed under this Section 13, notwithstanding that any present or future law or court decision or ruling may have the effect of reducing the amount of any deficiency claim to which the Collateral Agent or any Lender might otherwise be entitled but for such bidding at any such sale.

13.6 **Limitation.** Notwithstanding any provision herein contained to the contrary, the liability of each Guarantor under this Section 13 shall be limited to an amount not to exceed as of any date of determination the highest amount (after giving effect to the right of contribution established in Section 13.7, but before giving effect to any other guarantee) that can be guaranteed by such Guarantor, under the U.S. Bankruptcy Code or any applicable laws relating to fraudulent conveyances, fraudulent transfers or the insolvency of debtors.

13.7 **Contribution with Respect to Guaranty Obligations.**

(a) To the extent that any Guarantor shall make a payment under this Section 13 of all or any of the Obligations (a "**Guarantor Payment**") which, taking into account all other Guarantor Payments then previously or concurrently made by any other Guarantor, exceeds the amount which such Guarantor would otherwise have paid if each Guarantor had paid the aggregate Obligations satisfied by such Guarantor Payment in the same proportion that such Guarantor's "Allocable Amount" (as defined below) (as determined immediately prior to such Guarantor Payment) bore to the aggregate Allocable Amounts of each of the Guarantors as determined immediately prior to the making of such Guarantor Payment, then, following the occurrence of the Termination Date, such Guarantor shall be entitled to receive contribution and indemnification payments from, and be reimbursed by, each other Loan Party for the amount of such excess, pro rata based upon their respective Allocable Amounts in effect immediately prior to such Guarantor Payment.

(b) As of any date of determination, the "Allocable Amount" of any Guarantor shall be equal to the maximum amount of the claim which could then be recovered from such Guarantor under this Section 13 without rendering such claim voidable or avoidable under Section 548 of Chapter 11 of the United States Bankruptcy Code, as amended or under any applicable state Uniform Fraudulent Transfer Act, Uniform Fraudulent Conveyance Act or similar statute or common law.

(c) This Section 13.7 is intended only to define the relative rights of the Guarantors and nothing set forth in this Section 13.7 is intended to or shall impair the obligations of the Loan Parties, jointly and severally, to pay any amounts as and when the same shall become due and payable in accordance with the terms of this Agreement, including Section 13.1.

(d) The parties hereto acknowledge that the rights of contribution and indemnification hereunder shall constitute assets of the Guarantor to which such contribution and indemnification is owing.

(e) The rights of the indemnifying Guarantors against other Guarantors under this Section 13.7 shall be exercisable upon and after the Termination Date.

13.8 Liability Cumulative. The liability of the Guarantors under this Section 13 is in addition to and shall be cumulative with all liabilities of each Loan Party to the Collateral Agent and the Lenders under this Agreement and the other Loan Documents, without any limitation as to amount, unless the instrument or agreement evidencing or creating such other liability specifically provides to the contrary.

13.9 Release of Guarantors. Each Lender shall direct Collateral Agent to release and Collateral Agent shall release any Guarantor if all of the stock of such Guarantor owned by Borrower or another Guarantor is sold or transferred in a transaction permitted under the Loan Documents (including pursuant to a valid waiver or consent), to the extent that, after giving effect to such transaction, such Subsidiary would not be required to guaranty any Obligations pursuant to any Loan Document.

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

BORROWER:

VAPOTHERM, INC.

By /s/ John Landry
Name: John Landry
Title: Senior Vice President and Chief Financial Officer

GUARANTORS:

HGE HEALTHCARE SOLUTIONS, LLC

By: /s/ John Landry
Name: John Landry
Title: Manager

VAPOTHERM ACCESS CARE MANAGEMENT NETWORK, LLC

VAPOTHERM ACCESS MANAGEMENT SERVICES, LLC

By: HGE Health Care Solutions, LLC, as Managing Member

By /s/ John Landry
Name: John Landry
Title: Manager

COLLATERAL AGENT:

SLR INVESTMENT CORP.

By /s/ Anthony Storino
Name: Anthony Storino
Title: Authorized Signatory

Lenders:

SLR INVESTMENT CORP.

By /s/ Anthony Storino
Name: Anthony Storino
Title: Authorized Signatory

SLR SENIOR INVESTMENT CORP.

By /s/ Anthony Storino
Name: Anthony Storino
Title: Authorized Signatory

SCP PRIVATE CREDIT INCOME FUND SPV, LLC

By /s/ Anthony Storino
Name: Anthony Storino
Title: Authorized Signatory

SCP PRIVATE CREDIT INCOME BDC SPV LLC

By /s/ Anthony Storino
Name: Anthony Storino
Title: Authorized Signatory

SCP PRIVATE CORPORATE LENDING FUND SPV LLC

By /s/ Anthony Storino
Name: Anthony Storino
Title: Authorized Signatory

SCP SF DEBT FUND L.P.

By /s/ Anthony Storino
Name: Anthony Storino
Title: Authorized Signatory

SCHEDULE 1.1

Lenders and Term Loan Commitments

Term A Loans

Lender	Term A Loan Commitments	Commitment Percentage
SLR INVESTMENT CORP.	$28,531,366.91	28.53%
SLR SENIOR INVESTMENT CORP.	$5,924,091.87	5.92%
SCP PRIVATE CREDIT INCOME FUND SPV, LLC	$16,180,175.92	16.18%
SCP PRIVATE CREDIT INCOME BDC SPV LLC	$12,070,337.19	12.07%
SCP PRIVATE CORPORATE LENDING FUND SPV LLC	$15,716,356.55	15.72%
SCP SF DEBT FUND L.P.	$3,776,608.57	3.78%
SLR HC FUND SPV, LLC	$14,705,724.99	14.71%
SLR HC BDC LLC	$3,095,338.00	3.10%
TOTAL	**$100,000,000.00**	**100.00%**

Term B Loans

Lender	Term B Loan Commitments	Commitment Percentage
SLR INVESTMENT CORP.	$7,132,841.72	28.53%
SLR SENIOR INVESTMENT CORP.	$1,481,022.97	5.92%
SCP PRIVATE CREDIT INCOME FUND SPV, LLC	$4,045,043.98	16.18%
SCP PRIVATE CREDIT INCOME BDC SPV LLC	$3,017,584.30	12.07%
SCP PRIVATE CORPORATE LENDING FUND SPV LLC	$3,929,089.14	15.72%
SCP SF DEBT FUND L.P.	$944,152.14	3.78%
SLR HC FUND SPV, LLC	$3,676,431.25	14.71%
SLR HC BDC LLC	$773,834.50	3.10%
TOTAL	**$25,000,000.00**	**100.00%**

Aggregate (All Term Loans)

Lender	Total Term Loan Commitments	Commitment Percentage
SLR INVESTMENT CORP.	$35,664,208.63	28.53%
SLR SENIOR INVESTMENT CORP.	$7,405,114.84	5.92%
SCP PRIVATE CREDIT INCOME FUND SPV, LLC	$20,225,219.90	16.18%
SCP PRIVATE CREDIT INCOME BDC SPV LLC	$15,087,921.49	12.07%
SCP PRIVATE CORPORATE LENDING FUND SPV LLC	$19,645,445.69	15.72%
SCP SF DEBT FUND L.P.	$4,720,760.71	3.78%
SLR HC FUND SPV, LLC	$18,382,156.24	14.71%
SLR HC BDC LLC	$3,869,172.50	3.10%
TOTAL	**$125,000,000.00**	**100.00%**

SCHEDULE 7.13(a)

Month-End	Net Product Revenue
July 2022	$37,960,000
August 2022	$37,250,000
September 2022	$36,630,000
October 2022	$37,740,000
November 2022	$39,010,000
December 2022	$40,520,000
January 2023	$42,330,000
February 2023	$43,770,000
March 2023	$45,140,000
April 2023	$45,480,000
May 2023	$45,680,000
June 2023	$45,740,000
July 2023	$45,620,000
August 2023	$45,930,000
September 2023	$46,420,000
October 2023	$46,670,000
November 2023	$47,070,000
December 2023	$47,660,000
January 2024 and each month thereafter	75% of projected Net Product Revenue in accordance with an annual plan submitted by Borrower to Lenders pursuant to Section 6.2(a)(iii), such plan to be approved by Borrower's Board of Directors and shall be subject to the reasonable approval by Agent and Lenders in writing.

EXHIBIT A

Description of Collateral

The Collateral consists of all of each Loan Party's right, title and interest in and to the following property:

Subject to the exceptions noted below:

all goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, Intellectual Property, General Intangibles, commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

all of each any Loan Party's books and records relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral shall not include: (a) any "intent-to-use" trademark or service mark application for which a statement of use has not been filed and accepted, solely to the extent that the grant of a security interest in any such trademark application would impair the validity or enforceability of the resulting trademark registration or result in cancellation of such trademark application; (b) any interest of Borrower or Guarantor as a lessee or sublessee under a real property lease; (c) rights held under a lease, license, contract, property right or other General Intangible that are not assignable by their terms without the consent of a Person (other than the Borrower or Guarantor) (but only to the extent such restriction on assignment is effective under Section 9-406, 9-407, 9-408 or 9-409 of the Code (or any successor provision or provisions) of any relevant jurisdiction or any other applicable law (including the Bankruptcy Code) or principles of equity); (d)(i) any assets subject to purchase money indebtedness (so long as the (x) the purchase money indebtedness and Liens securing such indebtedness are permitted under the Agreement and (y) the documentation evidencing such purchase money indebtedness expressly prohibit a grant of any additional Liens on such assets) or (ii) any interest of Borrower or any Guarantor as a lessee under an Equipment lease if Borrower or such Guarantor is prohibited by the terms of such lease from granting a security interest in such lease or under which such an assignment or Lien would cause a default to occur under such lease; provided, however, that upon termination of such prohibition, such interest shall immediately become Collateral without any action by Borrower, such Guarantor, Collateral Agent or any Lender; (e) Excluded Accounts or (f) such other assets that the Collateral Agent and the Borrower agree that the cost of obtaining a security interest in such asset is excessive in relation to the value of the security to be afforded thereby (the foregoing clauses (a) through (f) are herein referred to as "**Excluded Assets**"). Neither the Borrower nor any Guarantor shall be obligated to enter into any leasehold mortgages with respect to any leased property.

EXHIBIT B

Collateral Agent and Lender Terms

1. Appointment of Collateral Agent.

(a) Each Lender hereby appoints SLR (together with any successor Collateral Agent pursuant to Section 7 of this Exhibit B) as Collateral Agent under the Loan Documents and authorizes Collateral Agent to (i) execute and deliver the Loan Documents and accept delivery thereof on its behalf from any Loan Party, (ii) take such action on its behalf and to exercise all rights, powers and remedies and perform the duties as are expressly delegated to Collateral Agent under such Loan Documents and (iii) exercise such powers as are reasonably incidental thereto.

(b) Without limiting the generality of clause (a) above, Collateral Agent shall have the sole and exclusive right and authority (to the exclusion of the Lenders), and is hereby authorized, to (i) act as the disbursing and collecting agent for the Lenders with respect to all payments and collections arising in connection with the Loan Documents (including in any other bankruptcy, insolvency or similar proceeding), and each Person making any payment in connection with any Loan Document to any Lender is hereby authorized to make such payment to Collateral Agent, (ii) file and prove claims and file other documents necessary or desirable to allow the claims of Collateral Agent and Lenders with respect to any Obligation in any bankruptcy, insolvency or similar proceeding (but not to vote, consent or otherwise act on behalf of such Lender), (iii) act as collateral agent for the Secured Parties for purposes of the perfection of all Liens created by the Loan Documents and all other purposes stated therein, (iv) manage, supervise and otherwise deal with the Collateral as permitted pursuant to the Loan Agreement, (v) take such other action as is necessary or desirable to maintain the perfection and priority of the Liens created or purported to be created by the Loan Documents, (vi) except as may be otherwise specified in any Loan Document, exercise all remedies given to Collateral Agent and the other Lenders with respect to the any Loan Party and/or the Collateral, whether under the Loan Documents, applicable Requirements of Law or otherwise and (vii) execute any amendment, consent or waiver under the Loan Documents on behalf of any Lender that has consented in writing to such amendment, consent or waiver; provided, however, that Collateral Agent hereby appoints, authorizes and directs each Lender to act as collateral sub-agent for Collateral Agent and the Lenders for purposes of the perfection of all Liens with respect to the Collateral, including any Collateral Account maintained by Borrower or any Guarantor with, and cash and Cash Equivalents held by, such Lender, and may further authorize and direct the Lenders to take further actions as collateral sub-agents for purposes of enforcing such Liens or otherwise to transfer the Collateral subject thereto to Collateral Agent, and each Lender hereby agrees to take such further actions to the extent, and only to the extent, so authorized and directed. Collateral Agent may, upon any term or condition it specifies, delegate or exercise any of its rights, powers and remedies under, and delegate or perform any of its duties or any other action with respect to, any Loan Document by or through any trustee, co-agent, employee, attorney-in-fact and any other Person (including any Lender). Any such Person shall benefit from this Exhibit B to the extent provided by Collateral Agent.

(c) Under the Loan Documents, Collateral Agent (i) is acting solely on behalf of the Lenders, with duties that are entirely administrative in nature, notwithstanding the use of the defined term "Collateral Agent", the terms "agent", "Collateral Agent" and "collateral agent" and similar terms in any Loan Document to refer to Collateral Agent, which terms are used for title purposes only, (ii) is not assuming any obligation under any Loan Document other than as expressly set forth therein or any role as agent, fiduciary or trustee of or for any Lender or any other Person and (iii) shall have no implied functions, responsibilities, duties, obligations or other liabilities under any Loan Document, and each Lender, by accepting the benefits of the Loan Documents, hereby waives and agrees not to assert any claim against Collateral Agent based on the roles, duties and legal relationships expressly disclaimed in clauses (i) through (iii) above. Except as expressly set forth in the Loan Documents, Collateral Agent shall not have any duty to disclose, and shall not be liable for failure to disclose, any information relating to Borrower or any of its Subsidiaries that is communicated to or obtained by SLR or any of its Affiliates in any capacity.

2. Binding Effect; Use of Discretion; E-Systems.

(a) Each Lender, by accepting the benefits of the Loan Documents, agrees that (i) any action taken by Collateral Agent or the Required Lenders (or, if expressly required in any Loan Document, a greater proportion of the Lenders) in accordance with the provisions of the Loan Documents, (ii) any action taken by Collateral Agent in reliance upon the instructions of the Required Lenders (or, where so required, such greater proportion) and (iii) the exercise by Collateral Agent or the Required Lenders (or, where so required, such greater proportion) of the powers set forth herein or therein, together with such other powers as are reasonably incidental thereto, shall be authorized and binding upon all of Lenders.

(b) If Collateral Agent shall request instructions from the Required Lenders or all affected Lenders with respect to any act or action (including failure to act) in connection with any Loan Document, then Collateral Agent shall be entitled to refrain from such act or taking such action unless and until Collateral Agent shall have received instructions from the Required Lenders or all affected Lenders, as the case may be, and Collateral Agent shall not incur liability to any Person by reason of so refraining. Collateral Agent shall be fully justified in failing or refusing to take any action under any Loan Document (i) if such action would, in the opinion of Collateral Agent, be contrary to any Requirement of Law or any Loan Document, (ii) if such action would, in the opinion of Collateral Agent, expose Collateral Agent to any potential liability under any Requirement of Law or (iii) if Collateral Agent shall not first be indemnified to its satisfaction by the Lenders against any and all liability and expense which may be incurred by it by reason of taking or continuing to take any such action. Without limiting the foregoing, no Lender shall have any right of action whatsoever against Collateral Agent as a result of Collateral Agent acting or refraining from acting under any Loan Document in accordance with the instructions of the Required Lenders or all affected Lenders, as applicable.

(c) Collateral Agent is hereby authorized by each Loan Party and each Lender to establish procedures (and to amend such procedures from time to time) to facilitate administration and servicing of the Term Loans and other matters incidental thereto. Without limiting the generality of the foregoing, Collateral Agent is hereby authorized to establish procedures to make available or deliver, or to accept, notices, documents and similar items on, by posting to or submitting and/or completion, on E-Systems. Each Loan Party and each Lender acknowledges and agrees that the use of transmissions via an E-System or electronic mail is not necessarily secure and that there are risks associated with such use, including risks of interception, disclosure and abuse, and Each Loan Party and each Lender assumes and accepts such risks by hereby authorizing the transmission via E-Systems or electronic mail. Each "e-signature" on any such posting shall be deemed sufficient to satisfy any requirement for a "signature", and each such posting shall be deemed sufficient to satisfy any requirement for a "writing", in each case including pursuant to any Loan Document, any applicable provision of any Code, the federal Uniform Electronic Transactions Act, the Electronic Signatures in Global and National Commerce Act and any substantive or procedural Requirement of Law governing such subject matter. All uses of an E-System shall be governed by and subject to, in addition to this Section, the separate terms, conditions and privacy policy posted or referenced in such E-System (or such terms, conditions and privacy policy as may be updated from time to time, including on such E-System) and related contractual obligations executed by Collateral Agent, each Loan Party and/or Lenders in connection with the use of such E-System. ALL E-SYSTEMS AND ELECTRONIC TRANSMISSIONS SHALL BE PROVIDED "AS IS" AND "AS AVAILABLE". NO REPRESENTATION OR WARRANTY OF ANY KIND IS MADE BY COLLATERAL AGENT, ANY LENDER OR ANY OF THEIR RELATED PERSONS IN CONNECTION WITH ANY E-SYSTEMS.

3. Collateral Agent's Reliance, Etc. Collateral Agent may, without incurring any liability hereunder, (a) consult with any of its Related Persons and, whether or not selected by it, any other advisors, accountants and other experts (including advisors to, and accountants and experts engaged by, any Loan Party) and (b) rely and act upon any document and information (including those transmitted by electronic transmission) and any telephone message or conversation, in each case believed by it to be genuine and transmitted, signed or otherwise authenticated by the appropriate parties. None of Collateral Agent and its Related Persons shall be liable for any action taken or omitted to be taken by any of them under or in connection with any Loan Document, and each Lender and each Loan Party hereby waives and shall not assert (and Borrower shall cause its Subsidiaries to waive and agree not to assert) any right, claim or cause of action based thereon, except to the extent of liabilities resulting from the gross negligence or willful misconduct of Collateral Agent or, as the case may be, such Related Person (each as determined in a final, non-appealable judgment of a court of competent jurisdiction). Without limiting the foregoing, Collateral Agent: (i) shall

not be responsible or otherwise incur liability for any action or omission taken in reliance upon the instructions of the Required Lenders or for the actions or omissions of any of its Related Persons, except to the extent that a court of competent jurisdiction determines in a final non-appealable judgment that Collateral Agent acted with gross negligence or willful misconduct in the selection of such Related Person; (ii) shall not be responsible to any Lender or other Person for the due execution, legality, validity, enforceability, effectiveness, genuineness, sufficiency or value of, or the attachment, perfection or priority of any Lien created or purported to be created under or in connection with, any Loan Document; (iii) makes no warranty or representation, and shall not be responsible, to any Lender or other Person for any statement, document, information, representation or warranty made or furnished by or on behalf of any Loan Party or any Related Person of any Loan Party in connection with any Loan Document or any transaction contemplated therein or any other document or information with respect to any Loan Party, whether or not transmitted or (except for documents expressly required under any Loan Document to be transmitted to the Lenders) omitted to be transmitted by Collateral Agent, including as to completeness, accuracy, scope or adequacy thereof, or for the scope, nature or results of any due diligence performed by Collateral Agent in connection with the Loan Documents; and (iv) shall not have any duty to ascertain or to inquire as to the performance or observance of any provision of any Loan Document, whether any condition set forth in any Loan Document is satisfied or waived, as to the financial condition of any Loan Party or as to the existence or continuation or possible occurrence or continuation of any Event of Default, and shall not be deemed to have notice or knowledge of such occurrence or continuation unless it has received a notice from Borrower or any Lender describing such Event of Default that is clearly labeled "notice of default" (in which case Collateral Agent shall promptly give notice of such receipt to all Lenders, provided that Collateral Agent shall not be liable to any Lender for any failure to do so, except to the extent that such failure is attributable to Collateral Agent's gross negligence or willful misconduct as determined by a final non-appealable judgment of a court of competent jurisdiction); and, for each of the items set forth in clauses (i) through (iv) above, each Lender and each Loan Party hereby waives and agrees not to assert (and each Loan Party shall cause its Subsidiaries to waive and agree not to assert) any right, claim or cause of action it might have against Collateral Agent based thereon.

4. Collateral Agent Individually. Collateral Agent and its Affiliates may make loans and other extensions of credit to, acquire stock and stock equivalents of, engage in any kind of business with, any Loan Party or any Affiliate of any Loan Party as though it were not acting as Collateral Agent and may receive separate fees and other payments therefor. To the extent Collateral Agent or any of its Affiliates makes any Term Loans or otherwise becomes a Lender hereunder, it shall have and may exercise the same rights and powers hereunder and shall be subject to the same obligations and liabilities as any other Lender and the terms "Lender", "Required Lender" and any similar terms shall, except where otherwise expressly provided in any Loan Document, include, without limitation, Collateral Agent or such Affiliate, as the case may be, in its individual capacity as Lender, or as one of the Required Lenders.

5. Lender Credit Decision; Collateral Agent Report. Each Lender acknowledges that it shall, independently and without reliance upon Collateral Agent, any Lender or any of their Related Persons or upon any document solely or in part because such document was transmitted by Collateral Agent or any of its Related Persons, conduct its own independent investigation of the financial condition and affairs of the Loan Parties and make and continue to make its own credit decisions in connection with entering into, and taking or not taking any action under, any Loan Document or with respect to any transaction contemplated in any Loan Document, in each case based on such documents and information as it shall deem appropriate. Except for documents expressly required by any Loan Document to be transmitted by Collateral Agent to the Lenders, Collateral Agent shall not have any duty or responsibility to provide any Lender with any credit or other information concerning the business, prospects, operations, Property, financial and other condition or creditworthiness of any Loan Parties or any Affiliate of any Loan Parties that may come in to the possession of Collateral Agent or any of its Related Persons. Each Lender agrees that is shall not rely on any field examination, audit or other report provided by Collateral Agent or its Related Persons (an "**Collateral Agent Report**"). Each Lender further acknowledges that any Collateral Agent Report (a) is provided to the Lenders solely as a courtesy, without consideration, and based upon the understanding that such Lender will not rely on such Collateral Agent Report, (b) was prepared by Collateral Agent or its Related Persons based upon information provided by the Loan Parties solely for Collateral Agent's own internal use, and (c) may not be complete and may not reflect all information and findings obtained by Collateral Agent or its Related Persons regarding the operations and condition of the Loan Parties. Neither Collateral Agent nor any of its Related Persons makes any representations or warranties of any kind with respect to (i) any existing or proposed financing, (ii) the accuracy or completeness of the information contained in any Collateral Agent Report or in any related documentation, (iii) the scope or adequacy of Collateral Agent's and its Related Persons' due diligence, or the presence or absence of any

errors or omissions contained in any Collateral Agent Report or in any related documentation, and (iv) any work performed by Collateral Agent or Collateral Agent's Related Persons in connection with or using any Collateral Agent Report or any related documentation. Neither Collateral Agent nor any of its Related Persons shall have any duties or obligations in connection with or as a result of any Lender receiving a copy of any Collateral Agent Report. Without limiting the generality of the foregoing, neither Collateral Agent nor any of its Related Persons shall have any responsibility for the accuracy or completeness of any Collateral Agent Report, or the appropriateness of any Collateral Agent Report for any Lender's purposes, and shall have no duty or responsibility to correct or update any Collateral Agent Report or disclose to any Lender any other information not embodied in any Collateral Agent Report, including any supplemental information obtained after the date of any Collateral Agent Report. Each Lender releases, and agrees that it will not assert, any claim against Collateral Agent or its Related Persons that in any way relates to any Collateral Agent Report or arises out of any Lender having access to any Collateral Agent Report or any discussion of its contents, and agrees to indemnify and hold harmless Collateral Agent and its Related Persons from all claims, liabilities and expenses relating to a breach by any Lender arising out of such Lender's access to any Collateral Agent Report or any discussion of its contents.

6. Indemnification. Each Lender agrees to reimburse Collateral Agent and each of its Related Persons (to the extent not reimbursed by Borrower or any other Loan Party as required under the Loan Documents (including pursuant to Section 12.2 of the Agreement)) promptly upon demand for its Pro Rata Share of any out-of-pocket costs and expenses (including, without limitation, fees, charges and disbursements of financial, legal and other advisors and any Taxes or insurance paid in the name of, or on behalf of, Borrower or any other Loan Party) incurred by Collateral Agent or any of its Related Persons in connection with the preparation, syndication, execution, delivery, administration, modification, amendment, consent, waiver or enforcement of, or the taking of any other action (whether through negotiations, through any work-out, bankruptcy, restructuring or other legal or other proceeding (including, without limitation, preparation for and/or response to any subpoena or request for document production relating thereto) or otherwise) in respect of, or legal advice with respect to, its rights or responsibilities under, any Loan Document. Each Lender further agrees to indemnify Collateral Agent and each of its Related Persons (to the extent not reimbursed by Borrower or any other Loan Party as required under the Loan Documents (including pursuant to Section 12.2 of the Agreement)), ratably according to its Pro Rata Share, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever (including, to the extent not indemnified by the applicable Lender, Taxes, interests and penalties imposed for not properly withholding or backup withholding on payments made to or for the account of any Lender) that may be imposed on, incurred by, or asserted against Collateral Agent or any of its Related Persons in any matter relating to or arising out of, in connection with or as a result of any Loan Document or any other act, event or transaction related, contemplated in or attendant to any such document, or, in each case, any action taken or omitted to be taken by Collateral Agent or any of its Related Persons under or with respect to the foregoing; provided that no Lender shall be liable to Collateral Agent or any of its Related Persons under this Section 6 of this Exhibit B to the extent such liability has resulted from the gross negligence or willful misconduct of Collateral Agent or, as the case may be, such Related Person, as determined by a final non-appealable judgment of a court of competent jurisdiction. To the extent required by any applicable Requirement of Law, Collateral Agent may withhold from any payment to any Lender under a Loan Document an amount equal to any applicable withholding Tax. If the IRS or any other Governmental Authority asserts a claim that Collateral Agent did not properly withhold Tax from amounts paid to or for the account of any Lender for any reason, or if Collateral Agent reasonably determines that it was required to withhold Taxes from a prior payment to or for the account of any Lender but failed to do so, such Lender shall promptly indemnify Collateral Agent fully for all amounts paid, directly or indirectly, by Collateral Agent as Tax or otherwise, including penalties and interest, and together with all expenses incurred by Collateral Agent. Collateral Agent may offset against any payment to any Lender under a Loan Document, any applicable withholding Tax that was required to be withheld from any prior payment to such Lender but which was not so withheld, as well as any other amounts for which Collateral Agent is entitled to indemnification from such Lender under the immediately preceding sentence of this Section 6 of this Exhibit B.

7. Successor Collateral Agent. Collateral Agent may resign at any time by delivering notice of such resignation to the Lenders and Borrower, effective on the date set forth in such notice (which date shall be no earlier than thirty (30) after the date of such notice, and if no date shall be set forth in such notice, thirty (30) days after the date of delivery thereof), in accordance with the terms of this Section 7 of this Exhibit B. If Collateral Agent delivers any such notice, the Required Lenders shall have the right to appoint a successor Collateral Agent with the consent of the Borrower (such consent not to be unreasonably withheld or delayed). If, after 30 days after the date of the retiring

Collateral Agent's notice of resignation, no successor Collateral Agent has been appointed by the Required Lenders and has accepted such appointment, then the retiring Collateral Agent may, on behalf of the Lenders, appoint a successor Collateral Agent from among the Lenders. Effective immediately upon its resignation, (a) the retiring Collateral Agent shall be discharged from its duties and obligations under the Loan Documents (other than its duties and obligations under Section 12.8 of the Agreement), (b) the Lenders shall assume and perform all of the duties of Collateral Agent until a successor Collateral Agent shall have accepted a valid appointment hereunder, (c) the retiring Collateral Agent and its Related Persons shall no longer have the benefit of any provision of any Loan Document other than with respect to any actions taken or omitted to be taken while such retiring Collateral Agent was, or because such Collateral Agent had been, validly acting as Collateral Agent under the Loan Documents, and (iv) subject to its rights under Section 2(b) of this Exhibit B, the retiring Collateral Agent shall take such action as may be reasonably necessary to assign to the successor Collateral Agent its rights as Collateral Agent under the Loan Documents. Effective immediately upon its acceptance of a valid appointment as Collateral Agent, a successor Collateral Agent shall succeed to, and become vested with, all the rights, powers, privileges and duties of the retiring Collateral Agent under the Loan Documents.

8. Release of Guarantors and Collateral. Each Lender hereby consents to the release and hereby directs Collateral Agent to release (or in the case of clause (b)(ii) below, release or subordinate) the following:

(a) any Guarantor if all of the stock of such Guarantor owned by Borrower or another Guarantor is sold or transferred in a transaction permitted under the Loan Documents (including pursuant to a valid waiver or consent), to the extent that, after giving effect to such transaction, such Subsidiary would not be required to guaranty any Obligations pursuant to any Loan Document; and

(b) any Lien held by Collateral Agent for the benefit of the Secured Parties against (i) any Collateral that is sold or otherwise disposed of by Borrower or any Guarantor in a transaction permitted by the Loan Documents (including pursuant to a valid waiver or consent), (ii) any Collateral subject to a Lien that is expressly permitted under clause (c) of the definition of the term "Permitted Lien" and (iii) all of the Collateral and Borrower and Guarantors upon the occurrence of the Termination Date.

9. Setoff and Sharing of Payments. In addition to any rights now or hereafter granted under any applicable Requirement of Law and not by way of limitation of any such rights, upon the occurrence and during the continuance of any Event of Default and subject to Section 10(d) of this Exhibit B, each Lender is hereby authorized at any time or from time to time upon the direction of Collateral Agent, without notice to Borrower or any other Person, any such notice being hereby expressly waived, to setoff and to appropriate and to apply any and all balances held by it at any of its offices for the account of Borrower or any other Loan Party (regardless of whether such balances are then due to Borrower or any other Loan Party) and any other properties or assets of the Borrower or any Loan Party at any time held or owing by that Lender to or for the credit or for the account of Borrower or any other Loan Party against and on account of any of the Obligations that are not paid when due. Any Lender exercising a right of setoff, or otherwise receiving any payment on account of the Obligations in excess of its Pro Rata Share thereof, shall purchase for cash (and the other Lenders shall sell) such participations in each such other Lender's Pro Rata Share of the Obligations as would be necessary to cause such Lender to share the amount so offset or otherwise received with each other Lender in accordance with their respective Pro Rata Shares of the Obligations. Each Loan Party agrees, to the fullest extent permitted by law, that (a) any Lender may exercise its right to setoff in accordance with this Section 9 or Section 12.9 of the Agreement with respect to amounts in excess of its Pro Rata Share of the Obligations and may purchase participations in accordance with the preceding sentence and (b) any Lender so purchasing a participation in the Term Loans made or other Obligations held by other Lenders may exercise all rights of offset, bankers' liens, counterclaims or similar rights with respect to such participation as fully as if such Lender were a direct holder of the Term Loans and the other Obligations in the amount of such participation. Notwithstanding the foregoing, if all or any portion of the offset amount or payment otherwise received is thereafter recovered from the Lender that has exercised the right of offset, the purchase of participations by that Lender shall be rescinded and the purchase price restored without interest.

10. Advances; Payments; Non-Funding Lenders; Actions in Concert.

(a) Advances; Payments. If Collateral Agent receives any payment with respect to a Term Loan for the account of the Lenders on or prior to 2:00 p.m. (New York time) on any Business Day, Collateral Agent shall pay to each applicable Lender such Lender's Pro Rata Share of such payment on such Business Day. If Collateral Agent receives any payment with respect to a Term Loan for the account of Lenders after 2:00 p.m. (New York time) on any Business Day, Collateral Agent shall pay to each applicable Lender such Lender's Pro Rata Share of such payment on the next Business Day.

(b) Return of Payments.

(i) If Collateral Agent pays an amount to a Lender under this Agreement in the belief or expectation that a related payment has been or will be received by Collateral Agent from, or on behalf of, Borrower or any other Loan Party and such related payment is not received by Collateral Agent, then Collateral Agent will be entitled to recover such amount (including interest accruing on such amount at the rate otherwise applicable to such Obligation) from such Lender on demand without setoff, counterclaim or deduction of any kind.

(ii) If Collateral Agent determines at any time that any amount received by Collateral Agent under any Loan Document must be returned to Borrower or any other Loan Party or paid to any other Person pursuant to any insolvency law or otherwise, then, notwithstanding any other term or condition of any Loan Document, Collateral Agent will not be required to distribute any portion thereof to any Lender. In addition, each Lender will repay to Collateral Agent on demand any portion of such amount that Collateral Agent has distributed to such Lender, together with interest at such rate, if any, as Collateral Agent is required to pay to Borrower or any other Loan Party or such other Person, without setoff, counterclaim or deduction of any kind and Collateral Agent will be entitled to set off against future distributions to such Lender any such amounts (with interest) that are not repaid on demand.

(c) Non-Funding Lenders.

(i) Unless Collateral Agent shall have received notice from a Lender prior to the date of any Term Loan that such Lender will not make available to Collateral Agent such Lender's Pro Rata Share of such Term Loan, Collateral Agent may assume that such Lender will make such amount available to it on the date of such Term Loan, and Collateral Agent may (but shall not be obligated to), in reliance upon such assumption, make available a corresponding amount for the account of Borrower on such date. If and to the extent that such Lender shall not have made such amount available to Collateral Agent, such Lender and Borrower severally agree to repay to Collateral Agent forthwith on demand such corresponding amount together with interest thereon, for each day from the day such amount is made available to Borrower until the day such amount is repaid to Collateral Agent, at a rate per annum equal to the interest rate applicable to the Obligation that would have been created when Collateral Agent made available such amount to Borrower had such Lender made a corresponding payment available. If such Lender shall repay such corresponding amount to Collateral Agent, the amount so repaid shall constitute such Lender's portion of such Term Loan for purposes of this Agreement.

(ii) To the extent that any Lender has failed to fund any Term Loan or any other payments required to be made by it under the Loan Documents after any such Term Loan is required to be made or such payment is due (a "**Non-Funding Lender**"), Collateral Agent shall be entitled to set off the funding short-fall against that Non-Funding Lender's Pro Rata Share of all payments received from or on behalf of Borrower thereunder. The failure of any Non-Funding Lender to make any Term Loan or any payment required by it hereunder shall not relieve any other Lender (each such other Lender, an "**Other Lender**") of its obligations to make such Term Loan, but neither any Other Lender nor Collateral Agent shall be responsible for the failure of any Non-Funding Lender to make such Term Loan or make any other payment required hereunder. Notwithstanding anything set forth herein to the contrary, a Non-Funding Lender shall not have any voting or consent rights under or with respect to any Loan Document or constitute a "Lender" (or be included in the calculation of "Required Lenders" hereunder) for any voting or consent rights under or with respect to any Loan Document. At Borrower's request, Collateral Agent or a Person reasonably acceptable to Collateral Agent shall have the right with Collateral Agent's consent and in Collateral Agent's sole discretion (but Collateral Agent or any such Person shall have no obligation) to purchase from any Non-Funding Lender, and each Lender agrees that if it becomes a Non-Funding Lender it shall, at Collateral Agent's request, sell and assign to Collateral Agent or such Person, all of the Term Loan Commitment (if any), and all of the

outstanding Term Loan of that Non-Funding Lender for an amount equal to the aggregate outstanding principal balance of the Term Loan held by such Non-Funding Lender and all accrued and unpaid interest with respect thereto through the date of sale, such purchase and sale to be consummated pursuant to an executed assignment agreement in form and substance reasonably satisfactory to, and acknowledged by, Collateral Agent.

(d) Actions in Concert. Anything in this Agreement to the contrary notwithstanding, each Lender hereby agrees with each other Lender that no Lender shall take any action to protect or enforce its rights arising out of any Loan Document (including exercising any rights of setoff) without first obtaining the prior written consent of Collateral Agent or, the Required Lenders, it being the intent of Lenders that any such action to protect or enforce rights under any Loan Document shall be taken in concert and at the direction or with the consent of Collateral Agent or, the Required Lenders).

11. Erroneous Payments.

(a) Each Lender hereby agrees that (i) if the Collateral Agent notifies such Lender that the Collateral Agent has determined in its sole discretion that any funds received by such Lender from the Collateral Agent or any of its Affiliates were erroneously transmitted to, or otherwise erroneously or mistakenly received by, such Lender (whether or not known to such Lender) (whether as a payment, prepayment or repayment of principal, interest, fees or otherwise; individually and collectively, a "***Erroneous Payment***") and demands the return of such Erroneous Payment (or a portion thereof), such Lender shall promptly, but in no event later than one Business Day thereafter, return to the Collateral Agent the amount of any such Erroneous Payment (or portion thereof) as to which such a demand was made, in same day funds (in the currency so received), together with interest thereon in respect of each day from and including the date such Erroneous Payment (or portion thereof) was received by such Lender to the date such amount is repaid to the Collateral Agent in same day funds at the greater of the federal funds rate and a rate determined by the Collateral Agent in accordance with banking industry rules on interbank compensation from time to time in effect and (ii) to the extent permitted by applicable law, such Lender shall not assert any right or claim to the Erroneous Payment, and hereby waives, any claim, counterclaim, defense or right of set-off or recoupment with respect to any demand, claim or counterclaim by the Collateral Agent for the return of any Erroneous Payments received, including without limitation waiver of any defense based on "discharge for value" or any similar doctrine. A notice of the Collateral Agent to any Lender under this clause (a) shall be conclusive, absent manifest error.

(b) Without limiting immediately preceding clause (a), each Lender hereby further agrees that if it receives an Erroneous Payment from the Collateral Agent (or any of its Affiliates) (x) that is in a different amount than, or on a different date from, that specified in a notice of payment sent by the Collateral Agent (or any of its Affiliates) with respect to such Erroneous Payment (an "***Erroneous Payment Notice***"), (y) that was not preceded or accompanied by an Erroneous Payment Notice, or (z) that such Lender otherwise becomes aware was transmitted, or received, in error or by mistake (in whole or in part), in each case, an error has been made (and that it is deemed to have knowledge of such error at the time of receipt of such Erroneous Payment) with respect to such Erroneous Payment, and to the extent permitted by applicable law, such Lender shall not assert any right or claim to the Erroneous Payment, and hereby waives, any claim, counterclaim, defense or right of set-off or recoupment with respect to any demand, claim or counterclaim by the Collateral Agent for the return of any Erroneous Payments received, including without limitation waiver of any defense based on "discharge for value" or any similar doctrine. Each Lender agrees that, in each such case, it shall promptly (and, in all events, within one Business Day of its knowledge (or deemed knowledge) of such error) notify the Collateral Agent of such occurrence and, upon demand from the Collateral Agent, it shall promptly, but in all events no later than one Business Day thereafter, return to the Collateral Agent the amount of any such Erroneous Payment (or portion thereof) as to which such a demand was made in same day funds (in the currency so received), together with interest thereon in respect of each day from and including the date such Erroneous Payment (or portion thereof) was received by such Lender to the date such amount is repaid to the Collateral Agent in same day funds at the greater of the federal funds rate and a rate determined by the Collateral Agent in accordance with banking industry rules on interbank compensation from time to time in effect.

(c) Each Loan Party hereby agrees that (x) in the event an Erroneous Payment (or portion thereof) is not recovered from any Lender that has received such Erroneous Payment (or portion thereof) for any reason, the Collateral Agent shall be subrogated to all the rights of such Lender with respect to such amount and (y) an Erroneous Payment shall not pay, prepay, repay, discharge or otherwise satisfy any Obligations owed by the Loan Parties.

(d) This Section 11 shall not apply to the disbursement of any proceeds of a Loan to or at the express direction of the Borrower, and no Erroneous Payment shall constitute, create, increase or otherwise alter any Obligations of the Loan Parties under the Loan Documents or otherwise. An Erroneous Payment shall not pay, prepay, repay, discharge or otherwise satisfy any Obligations owed by the Loan Parties; provided that this Section 11 shall not be interpreted to increase (or accelerate the due date for), or have the effect of increasing (or accelerating the due date for), the Obligations of the Loan Parties relative to the amount (and/or timing for payment) of the Obligations that would have been payable had such Erroneous Payment not been made by the Collateral Agent.

(e) Each party's obligations under this Section 11 shall survive the resignation or replacement of the Collateral Agent, the termination of the Commitments or the repayment, satisfaction or discharge of all Obligations (or any portion thereof) under any Loan Document.

EXHIBIT C

Loan Payment Request Form

Fax To: (212) 993-1698 Date:

LOAN PAYMENT:
VAPOTHERM, INC.

From Account #_____ To Account #_____
(Deposit Account #) (Loan Account #)
Principal $_____ and/or Interest $_____

Authorized Signature:_____ Phone Number:
Print Name/Title: _____

LOAN ADVANCE:

Complete *Outgoing Wire Request* section below if all or a portion of the funds from this loan advance are for an outgoing wire.

From Account #_____ To Account #_____
(Loan Account #) (Deposit Account #)

Amount of Advance $_____

All of each Loan Party's representations and warranties in the Loan and Security Agreement are true and correct in all material respects on the date of the request for an advance; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true and correct all material respects as of such date:

Authorized Signature:_____Phone Number:
Print Name/Title: _____

OUTGOING WIRE REQUEST:
Complete only if all or a portion of funds from the loan advance above is to be wired.

Beneficiary Name: _____ Amount of Wire: $_____
Beneficiary Bank:_____ Account Number:_____
City and State: _____

Beneficiary Bank Transit (ABA) #: _____ Beneficiary Bank Code (Swift, Sort, Chip, etc.): _____
(For International Wire Only)
Intermediary Bank: _____ Transit (ABA) #:
For Further Credit to:

Special Instruction:
By signing below, I (we) acknowledge and agree that my (our) funds transfer request shall be processed in accordance with and subject to the terms and conditions set forth in the agreements(s) covering funds transfer service(s), which agreements(s) were previously received and executed by me (us).

Authorized Signature: _____ 2nd Signature (if required): _____

Print Name/Title: _____ _____Print Name/Title: _____

Telephone #: _____ Telephone #: _____

EXHIBIT D

Compliance Certificate

TO: SLR INVESTMENT CORP., as Collateral Agent and Lender

FROM: VAPOTHERM, INC.

The undersigned authorized officer ("**Officer**") of VAPOTHERM, INC. ("**Borrower**"), in his capacity as an authorized officer of the Borrower and not in his individual capacity, hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement dated as of February 18, 2022 by and among Borrower, the Guarantors, Collateral Agent, and the Lenders from time to time party thereto (the "**Loan Agreement**;" capitalized terms used but not otherwise defined herein shall have the meanings given them in the Loan Agreement),

(a) There are no existing defaults or Events of Default, except as noted below;

(b) Except as noted below, all representations and warranties of Borrower stated in the Loan Documents are true and correct in all material respects on this date; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true and correct in all material respects as of such date.

(c) Borrower, and each of Borrower's Subsidiaries, has timely filed all required Tax returns and reports, Borrower, and each of Borrower's Subsidiaries, has timely paid all foreign, federal, state, and material local, Taxes, owed by Borrower, or Subsidiary, except as otherwise permitted pursuant to the terms of Section 5.8 of the Loan Agreement;

(d) Except as noted below, no Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Collateral Agent and the Lenders; and

(e) Attached is an updated Perfection Certificate.[1]

Attached are the required documents, if any, supporting our certification(s). The Officer, on behalf of Borrower, further certifies that the attached financial statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes and except, in the case of unaudited financial statements, for the absence of footnotes and subject to year-end audit adjustments as to the interim financial statements.

Please indicate compliance status since the last Compliance Certificate by circling Yes, No, or N/A under "Complies" column.

11 To be delivered with the financial statements for the third month of any calendar quarter.

	Reporting Covenant	Requirement	Actual	Complies		
1)	Financial statements	Monthly within 30 days		Yes	No	N/A
2)	Annual (CPA Audited) statements	Within 90 days after FYE		Yes	No	N/A
3)	Annual Financial Projections/Budget (prepared on a monthly basis)	Annually (within earlier 10 days of approval or February 28), and when revised		Yes	No	N/A
4)	8-K, 10-K and 10-Q Filings	Within 5 days of filing		Yes	No	N/A
5)	Compliance Certificate	Monthly within 30 days		Yes	No	N/A
6)	Total amount of Borrower's and Guarantor's cash and Cash Equivalents at the last day of the measurement period		$_____			N/A
7)	Total amount of Borrower's Subsidiaries' (other than Guarantors) cash and Cash Equivalents at the last day of the measurement period		$_____			N/A

Deposit and Securities Accounts
(Please list all accounts; attach separate sheet if additional space needed)

	Institution Name	Account Number	New Account?		Account Control Agreement in place?	
1)			Yes	No	Yes	No
2)			Yes	No	Yes	No
3)			Yes	No	Yes	No
4)			Yes	No	Yes	No

[Financial Covenant

Minimum Net Product Revenue:

Minimum Net Product Revenue (period ending _____)	(A) Actual Net Product Revenue $_____	(B) Minimum Net Product Revenue per Section 7.13(a) $_____	Complies with Minimum Net Product Revenue (Is (A) greater than or equal to (B))?

Yes (in compliance) No (not in compliance)(N/A)][2]

Other Matters

22 Note: commencing with the six (6) month period ending July 31, 2022.

1)	Have there been any changes in Key Persons since the last Compliance Certificate?	Yes	No
2)	Have there been any transfers/sales/disposals/retirement of Collateral or IP prohibited by the Loan Agreement?	Yes	No
3)	Have there been any new or pending claims or causes of action against Borrower that involve more than Five Hundred Thousand Dollars ($500,000.00)?	Yes	No
4)	Have there been any amendments of or other changes to the respective Operating Documents of Borrower or any Guarantor? If yes, provide copies of any such amendments or changes with this Compliance Certificate.	Yes	No
5)	Has Borrower or any Subsidiary entered into or amended any Material Agreement? If yes, please explain and provide a copy of the Material Agreement(s) and/or amendment(s).	Yes	No
6)	Has Borrower provided the Collateral Agent with all notices required to be delivered under Sections 6.2(a) and 6.2(b) of the Loan Agreement?	Yes	No

Exceptions

Please explain any exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions." Attach separate sheet if additional space needed.)

VAPOTHERM, INC.
By: _____
Name: _____
Title: _____

Date:

COLLATERAL AGENT USE ONLY

Received by: _____ Date: _____
Verified by: _____ Date: _____
Compliance Status: Yes No

Exhibit E

CORPORATE BORROWING CERTIFICATE

BORROWER: VAPOTHERM, INC. **DATE**: February 18, 2022
LENDER: SLR
INVESTMENT CORP., as Collateral Agent and Lender

I hereby certify as follows, as of the date set forth above:

1. I am the Secretary, Assistant Secretary or other officer of Borrower. My title is as set forth below.

2. Borrower's exact legal name is set forth above. Borrower is a corporation existing under the laws of the State of Delaware.

3. Attached hereto as Exhibit A and Exhibit B, respectively, are true, correct and complete copies of (i) Borrower's Certificate of Incorporation (including amendments), as filed with the Secretary of State of the state in which Borrower is incorporated as set forth in paragraph 2 above; and (ii) Borrower's Bylaws. Neither such Certificate of Incorporation nor such Bylaws have been amended, annulled, rescinded, revoked or supplemented, and such Certificate of Incorporation and such Bylaws remain in full force and effect as of the date hereof.

4. The following resolutions were duly and validly adopted by Borrower's board of directors at a duly held meeting of such directors (or pursuant to a unanimous written consent or other authorized corporate action). Such resolutions are in full force and effect as of the date hereof and have not been in any way modified, repealed, rescinded, amended or revoked, and the Lenders may rely on them until each Lender receives written notice of revocation from Borrower.

[*Balance of Page Intentionally Left Blank*]

RESOLVED, that **any one** of the following officers or employees of Borrower, whose names, titles and signatures are below, may act on behalf of Borrower:

Name	Title	Signature	Authorized to Add or Remove Signatories
			□
			□
			□
			□

RESOLVED FURTHER, that **any one** of the persons designated above with a checked box beside his or her name may, from time to time, add or remove any individuals to and from the above list of persons authorized to act on behalf of Borrower.

RESOLVED FURTHER, that such individuals may, on behalf of Borrower:

Borrow Money. Borrow money from the Lenders.
Execute Loan Documents. Execute any loan documents any Lender requires.
Grant Security. Grant Collateral Agent a security interest in any of Borrower's assets.
Negotiate Items. Negotiate or discount all drafts, trade acceptances, promissory notes, or other indebtedness in which Borrower has an interest and receive cash or otherwise use the proceeds.
Pay Fees. Pay fees under the Loan Agreement or any other Loan Document.
Further Acts. Designate other individuals to request advances, pay fees and costs and execute other documents or agreements (including documents or agreement that waive Borrower's right to a jury trial) they believe to be necessary to effectuate such resolutions.

RESOLVED FURTHER, that all acts authorized by the above resolutions and any prior acts relating thereto are ratified.

[*Balance of Page Intentionally Left Blank*]

5. The persons listed above are Borrower's officers or employees with their titles and signatures shown next to their names.

By: _____
Name: _____
Title: _____

**** If the Secretary, Assistant Secretary or other certifying officer executing above is designated by the resolutions set forth in paragraph 4 as one of the authorized signing officers, this Certificate must also be signed by a second authorized officer or director of Borrower.*

I, the _____ of Borrower, hereby certify as to paragraphs 1 through 5 above, as
[print title]
of the date set forth above.

By: _____
Name: _____
Title: _____

[*Signature Page to Corporate Borrowing Certificate*]

EXHIBIT A

Certificate of Incorporation (including amendments)

[see attached]

EXHIBIT B

Bylaws

[see attached]

EXHIBIT F

ACH LETTER

SLR INVESTMENT CORP.
500 Park Avenue, 3rd Floor
New York, NY 10022
Attention: Anthony Storino
Fax: (212) 993-1698
Email: astorino@slrcp.com

Re: Loan and Security Agreement dated as of February 18, 2022 (the "**Agreement**") by and among VAPOTHERM, INC. ("Borrower"), SLR Investment Corp. ("**SLR**"), as collateral agent (in such capacity, "**Collateral Agent**") and the Lenders listed on Schedule 1.1 thereof or otherwise a party thereto from time to time, including SLR in its capacity as a Lender (each a "Lender" and collectively, the "Lenders"). Capitalized terms used but not otherwise defined herein shall have the meanings given them under the Agreement.

In connection with the above referenced Agreement, the Borrower hereby authorizes the Collateral Agent to, at its discretion and with prior notice of at least one (1) Business Day, initiate debit entries to the Borrower's account indicated below (i) on each payment date of all Obligations then due and owing, (ii) at any time any payment due and owing with respect to Lenders' Expenses, and (iii) upon an Event of Default, any other Obligations outstanding, in each case pursuant to Section 2.3(e) of the Agreement. The Borrower authorizes the depository institution named below to debit to such account.

DEPOSITORY NAME	BRANCH
CITY	STATE AND ZIP CODE
TRANSIT/ABA NUMBER	ACCOUNT NUMBER

This authority will remain in full force and effect so long as any amounts are due under the Agreement.

[*Signature page to follow*]

VAPOTHERM, INC.

By: _____

Title: _____

Date: _____

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118773011_2

Exhibit G

Form of Secured Promissory Note

SECURED PROMISSORY NOTE
(Term [A][B] Loan)

$_____ Dated: [DATE]

FOR VALUE RECEIVED, the undersigned, Vapotherm, Inc., a Delaware corporation with offices located at 100 Domain Drive, Exeter, NH 03833 ("**Borrower**") HEREBY PROMISES TO PAY SLR Investment Corp. ("**Lender**") (or its registered assigns) the principal amount of [_____]DOLLARS ($_____) or such lesser amount as shall equal the outstanding principal balance of the Term [A][B] Loan made to Borrower by Lender, plus interest on the aggregate unpaid principal amount of such Term [A][B] Loan, at the rates and in accordance with the terms of the Loan and Security Agreement dated as of February 18, 2022 by and among Borrower, the Guarantors, Lender, SLR Investment Corp., as Collateral Agent, and the other Lenders from time to time party thereto (as amended, restated, supplemented or otherwise modified from time to time, the "**Loan Agreement**"). If not sooner paid, the entire principal amount and all accrued and unpaid interest hereunder shall be due and payable on the Maturity Date as set forth in the Loan Agreement. Any capitalized term not otherwise defined herein shall have the meaning attributed to such term in the Loan Agreement.

Principal, interest and all other amounts due with respect to the Term [A][B] Loan, are payable in lawful money of the United States of America to Lender as set forth in the Loan Agreement and this Secured Promissory Note (this "**Note**"). The principal amount of this Note and the interest rate applicable thereto, and all payments made with respect thereto, shall be recorded by Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Note.

The Loan Agreement, among other things, (a) provides for the making of a secured Term [A][B] Loan by Lender to Borrower, and (b) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events.

This Note may not be prepaid except as set forth in Section 2.2(c), Section 2.2(d) or Section 6.5 of the Loan Agreement.

This Note and the obligation of Borrower to repay the unpaid principal amount of the Term [A][B] Loan, interest on the Term [A][B] Loan and all other amounts due Lender under the Loan Agreement is secured under the Loan Agreement.

Presentment for payment, demand, notice of protest and all other demands and notices of any kind in connection with the execution, delivery, performance and enforcement of this Note are hereby waived.

This Note shall be governed by, and construed and interpreted in accordance with, the laws of the State of New York.

The ownership of an interest in this Note shall be registered on a record of ownership maintained by Lender or its agent. Notwithstanding anything else in this Note to the contrary, the right to the principal of, and stated interest on, this Note may be transferred only if the transfer (a) is registered on such record of ownership and the transferee is identified as the owner of an interest in the obligation and (b) is permitted under Section 12.2 of the Loan Agreement. Borrower shall be entitled to treat the registered holder of this Note (as recorded on such record of ownership) as the owner in fact thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in this Note on the part of any other person or entity.

[*Balance of Page Intentionally Left Blank*]

IN WITNESS WHEREOF, Borrower has caused this Note to be duly executed by one of its officers thereunto duly authorized on the date hereof.

BORROWER:

VAPOTHERM, INC.

By _____
Name: _____
Title: _____

LOAN AND PAYMENTS OF PRINCIPAL

Date	Interest Rate	Principal Amount	Scheduled Payment Amount	Notation By

118773011_2

Exhibit H

Form of Warrant

[*see attached*]

Exhibit I

Taxes; Increased Costs.

1. Defined Terms. For purposes of this Exhibit I:

(a) "**Connection Income Taxes**" means Other Connection Taxes that are imposed on or measured by net income (however denominated) or that are franchise Taxes or branch profits Taxes.

(b) "**Excluded Taxes**" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient, (i) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (A) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (B) that are Other Connection Taxes, (ii) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in a Term Loan or Term Loan Commitment pursuant to a law in effect on the date on which (A) such Lender acquires such interest in the Term Loan or Term Commitment or (B) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2 or Section 4 of this Exhibit I, amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office, (iii) Taxes attributable to such Recipient's failure to comply with Section 7 of this Exhibit I and (iv) any withholding Taxes imposed under FATCA.

(c) "**FATCA**" means Sections 1471 through 1474 of the Internal Revenue Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreements entered into pursuant to Section 1471(b)(1) of the Internal Revenue Code, and any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement, treaty or convention among Governmental Authorities and implementing such Sections of the Internal Revenue Code.

(d) "**Foreign Lender**" means a Lender that is not a U.S. Person.

(e) "**Indemnified Taxes**" means (i) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of any Loan Party under any Loan Document and (ii) to the extent not otherwise described in clause (i), Other Taxes.

(f) "**Other Connection Taxes**" means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Term Loan or Loan Document).

(g) "**Other Taxes**" means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment.

(h) "**Recipient**" means Collateral Agent or any Lender, as applicable.

(i) "**U.S. Person**" means any Person that is a "United States person" as defined in Section 7701(a)(30) of the Internal Revenue Code.

(j) "**Withholding Agent**" means Borrower and Collateral Agent.

2. Payments Free of Taxes. Any and all payments by or on account of any obligation of any Loan Party under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by applicable law. If any applicable law (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then the applicable Withholding Agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with applicable law and, if such Tax is an Indemnified Tax, then the sum payable by the applicable Loan Party shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section 2 or Section 4 of this Exhibit I) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.

3. Payment of Other Taxes by Loan Parties. The Loan Parties shall timely pay to the relevant Governmental Authority in accordance with applicable law, or at the option of Collateral Agent timely reimburse it for the payment of, any Other Taxes.

4. Indemnification by Loan Parties. The Loan Parties shall indemnify each Recipient, within 10 days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under Section 2 of this Exhibit I or this Section 4) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to Borrower by a Lender (with a copy to Collateral Agent), or by Collateral Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error.

5. Indemnification by the Lenders. Each Lender shall severally indemnify Collateral Agent, within 10 days after demand therefor, for (a) any Indemnified Taxes attributable to such Lender (but only to the extent that any Loan Party has not already indemnified Collateral Agent for such Indemnified Taxes and without limiting the obligation of any Loan Party to do so), (b) any Taxes attributable to such Lender's failure to comply with the provisions of Section 12.1 of the Agreement relating to the maintenance of a Participant Register and (c) any Excluded Taxes attributable to such Lender, in each case, that are payable or paid by Collateral Agent in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to any Lender by Collateral Agent shall be conclusive absent manifest error. Each Lender hereby authorizes Collateral Agent to set off and apply any and all amounts at any time owing to such Lender under any Loan Document or otherwise payable by Collateral Agent to the Lender from any other source against any amount due to Collateral Agent under this Section 5.

6. Evidence of Payments. As soon as practicable after any payment of Taxes by any Loan Party to a Governmental Authority pursuant to the provisions of this Exhibit I, the Loan Party shall deliver to Collateral Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to Collateral Agent.

7. Status of Lenders.

(a) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to Borrower and Collateral Agent, at the time or times reasonably requested by Borrower or Collateral Agent, such properly completed and executed documentation reasonably requested by Borrower or Collateral Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by Borrower or Collateral Agent, shall deliver such other documentation prescribed by applicable law or reasonably requested by Borrower or Collateral Agent as will enable Borrower or Collateral Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Sections 7(b)(i), 7(b)(ii) and 7(b)(iv) of this Exhibit I) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.

(b) Without limiting the generality of the foregoing, in the event that Borrower is a U.S. Person,

(i) any Lender that is a U.S. Person shall deliver to Borrower and Collateral Agent on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Collateral Agent), executed copies of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

(ii) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower and Collateral Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Collateral Agent), whichever of the following is applicable:

(A) in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

(B) executed copies of IRS Form W-8ECI;

(C) in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Internal Revenue Code, (x) a certificate, in form and substance reasonably acceptable to Borrower and Collateral Agent, to the effect that such Foreign Lender (or other applicable Person) is not a "bank" within the meaning of Section 881(c)(3)(A) of the Internal Revenue Code, a "10 percent shareholder" of Borrower within the meaning of Section 871(h)(3)(B) of the Internal Revenue Code, or a "controlled foreign corporation" related to Borrower as described in Section 881(c)(3)(C) of the Internal Revenue Code (a "**U.S. Tax Compliance Certificate**") and (y) executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E; or

(D) to the extent a Foreign Lender is not the beneficial owner, executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN, IRS Form W-8BEN-E, a U.S. Tax Compliance Certificate, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate on behalf of each such direct and indirect partner;

(iii) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower and Collateral Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Collateral Agent), executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable law to permit Borrower or Collateral Agent to determine the withholding or deduction required to be made; and

(iv) if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Internal Revenue Code, as applicable), such Lender shall deliver to Borrower and Collateral Agent at the time or times prescribed by law and at

such time or times reasonably requested by Borrower or Collateral Agent such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Internal Revenue Code) and such additional documentation reasonably requested by Borrower or Collateral Agent as may be necessary for Borrower and Collateral Agent to comply with their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount, if any, to deduct and withhold from such payment. Solely for purposes of this clause (iv), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

(v) Each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify Borrower and Collateral Agent in writing of its legal inability to do so.

8. Treatment of Certain Refunds. If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to the provisions of this Exhibit I (including by the payment of additional amounts pursuant to the provisions of this Exhibit I), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under the provisions of this Exhibit I with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund). Such indemnifying party, upon the request of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this Section 8 (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that such indemnified party is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this Section 8, in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this Section 8 the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This Section 8 shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

9. Increased Costs. If any change in applicable law shall subject any Recipient to any Taxes (other than (A) Indemnified Taxes, (B) Taxes described in clauses (ii) through (iv) of the definition of Excluded Taxes and (C) Connection Income Taxes) on its loans, loan principal, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto, and the result shall be to increase the cost to such Recipient of making, converting to, continuing or maintaining any Term Loan or of maintaining its obligation to make any such Term Loan, or to reduce the amount of any sum received or receivable by such Recipient (whether of principal, interest or any other amount), then, upon the request of such Recipient, the applicable Loan Party will pay to such Recipient such additional amount or amounts as will compensate such Recipient for such additional costs incurred or reduction suffered.

10. Survival. Each party's obligations under the provisions of this Exhibit I shall survive the resignation or replacement of Collateral Agent or any assignment of rights by, or the replacement of, a Lender, the termination of the Term Loan Commitments and the repayment, satisfaction or discharge of all obligations under any Loan Document.

Exhibit 10.21

Participant Name:	
Number of Restricted Stock Units subject to Award:	
Date of Grant:	

VAPOTHERM, INC.
2018 EQUITY INCENTIVE PLAN

RESTRICTED STOCK UNIT AWARD AGREEMENT

This agreement (this "**Agreement**") evidences an award (the "**Award**") of restricted stock units granted by Vapotherm, Inc. (the "**Company**") to the individual named above (the "**Participant**"), pursuant to and subject to the terms of the Vapotherm, Inc. 2018 Equity Incentive Plan (as from time to time amended and in effect, the "**Plan**"). Except as otherwise defined herein, all capitalized terms used herein have the same meaning as in the Plan.

1. **Grant of Restricted Stock Unit Award.** The Company grants to the Participant on the date set forth above (the "**Date of Grant**") the number of restricted stock units (the "**Restricted Stock Units**") set forth above giving the Participant the conditional right to receive, without payment and pursuant to and subject to the terms and conditions set forth in this Agreement and in the Plan, one share of Stock (a "**Share**") with respect to each Restricted Stock Unit forming part of the Award, subject to adjustment pursuant to Section 7 of the Plan in respect of transactions occurring after the date hereof.

2. **Vesting; Cessation of Employment**.

(a) **Vesting.** Unless earlier terminated, forfeited, relinquished or expired, [100% of the Restricted Stock Units will vest on the [June 30th/December 31st/Insert other date] following the third (3rd) anniversary of the Date of Grant/1/3 of the Restricted Stock Units will vest on the [June 30th/December 31st/Insert other date] following the first (1st) anniversary of the Date of Grant, 1/3 of the Restricted Stock Units will vest on the next December 31st and the remaining 1/3 of the Restricted Stock Units will vest on the next December 31st/OR Insert other vesting terms], subject to the Participant remaining in continuous Employment from the Date of Grant through such vesting date.

(b) **Cessation of Employment.** Except as expressly provided for in an employment agreement between the Participant and the Company that is in effect at the time of the Participant's termination of employment, automatically and immediately upon the cessation of the Participant's Employment, (i) the unvested portion of this Award will terminate and be forfeited for no consideration, and (ii) the vested portion of this Award, if any, will terminate and be forfeited for no consideration if the Participant's Employment is terminated for Cause or occurs in circumstances that in the determination of the Administrator would have constituted grounds for the Participant's Employment to be terminated for Cause (in each case, without regard to the lapsing of any required notice or cure periods in connection therewith).

3. **Delivery of Shares.** Subject to Section 4 below, the Company shall, as soon as practicable upon the vesting of any portion of the Award (but in no event later than thirty (30) days following the date on which such Restricted Stock Units vest), effect delivery of the Shares with respect to such vested Restricted Stock Units to the Participant (or, in the event of the Participant's death, to the person to whom the Award has passed by will or the laws of descent and distribution). No Shares will be issued pursuant to this Award unless and until all legal requirements applicable to the issuance or transfer of such Shares have been complied with to the satisfaction of the Administrator.

4. **Forfeiture; Recovery of Compensation.** By accepting this Award, the Participant expressly acknowledges and agrees that his or her rights, and those of any permitted transferee of this Award, under this Award, including the right to any Shares acquired under this Award or proceeds from the disposition thereof, are subject to Section 6(a)(5) of the Plan (including any successor provision). The Participant further agrees to be bound by the terms of any clawback or recoupment policy of the Company that applies to incentive compensation that includes Awards such as the Restricted Stock Units. Nothing in the preceding sentence may be construed as limiting the general application of Section 9 of this Agreement.

5. **Dividends; Other Rights.** This Award may not be interpreted to bestow upon the Participant any equity interest or ownership in the Company or any subsidiary prior to the date on which the Company actually delivers Shares to the Participant. The Participant is not entitled to vote any Shares by reason of the granting of this Award or to receive or be credited with any dividends declared and payable on any Share prior to the date on which any such Share is delivered to the Participant hereunder. The Participant will have the rights of a shareholder only as to those Shares, if any, that are actually delivered under this Award.

6. **Restrictions on Transfer.** This Award may not be transferred except as expressly permitted under Section 6(a)(3) of the Plan.

7. **Certain Tax Matters; Sell to Cover.**

(a) The Participant expressly acknowledges and agrees that (i) the settlement of vested Restricted Stock Units acquired hereunder will give rise to "wages" subject to withholding and (ii) the Participant's rights hereunder, including the right to be issued Shares upon the vesting of the Award (or any portion thereof), are subject to the Participant's promptly paying, or in respect of any later requirement of withholding being liable promptly to pay at such time as such withholdings are due, to the Company in cash (or by such other means as may be acceptable to the Administrator in its discretion) all taxes required to be withheld, if any, relating to the Award. In lieu of the Sell to Cover provided below, the Participant may elect to pay to the Company in cash any amount of the Withholding Obligation.

(i) By accepting this Award, and unless the Participant has elected to pay the Withholding Obligation in cash as provided above, the Participant hereby acknowledges and agrees that he or she elects to sell Shares issued in respect of the Award to satisfy the statutory minimum amount of the tax withholdings described in subsection (a) above (the "**Withholding**

Obligation") and to allow the Agent to remit the cash proceeds of such sale to the Company ("**Sell to Cover**").

(ii) The Participant hereby irrevocably appoints Shareworks, or such other registered broker-dealer that is a member of the Financial Industry Regulatory Authority as the Company may select, as the Participant's agent (the "**Agent**") to effectuate the Sell to Cover, and the Participant authorizes and directs the Agent to: (i) sell on the open market at the then prevailing market price(s), on the Participant's behalf, as soon as practicable on or after the date on which the Shares are delivered to the Participant pursuant to Section 3 hereof in connection with the settlement of vested Restricted Stock Units, the number (rounded up to the next whole number) of Shares sufficient to generate proceeds to cover (A) the satisfaction of the Withholding Obligation arising from the settlement of vested Restricted Stock Units by the issuance and delivery of Shares to the Participant and (B) all applicable fees and commissions due to, or required to be collected by, the Agent with respect thereto; (ii) remit directly to the Company the proceeds from the sale of the Shares referred to in clause (i) above necessary to satisfy the Withholding Obligation; (iii) retain the amount required to cover all applicable fees and commissions due to, or required to be collected by, the Agent, relating directly to the sale of the Shares referred to in clause (i) above; and (iv) maintain any remaining funds from the sale of the Shares referred to in clause (i) above in the Participant's account with the Agent. The Participant hereby authorizes the Company and the Agent to cooperate and communicate with one another to determine the number of Shares that must be sold to satisfy the Participant's obligations hereunder and to otherwise effect the purpose and intent of this Agreement and satisfy the rights and obligations hereunder.

(iii) The Participant acknowledges that the Agent is under no obligation to arrange for the sale of Shares at any particular price under a Sell to Cover and that the Agent may affect sales under any Sell to Cover in one or more sales and that the average price for executions resulting from bunched orders may be assigned to the Participant's account. The Participant further acknowledges that he or she will be responsible for all brokerage fees and other costs of sale associated with any Sell to Cover or transaction contemplated by this Section 7(a) and agrees to indemnify and hold the Company harmless from any losses, costs, damages, or expenses relating to any such sale. In addition, the Participant acknowledges that it may not be possible to sell Shares as provided for in this Section 7(a) due to various circumstances. If it is not possible to sell Shares in a Sell to Cover or if the Company determines that the Withholding Obligation will be satisfied in a manner other than Sell to Cover, the Company will assist the Participant in determining additional alternatives available to the Participant. In the event of the Agent's inability to sell shares of Common Stock, the Participant will continue to be responsible for the timely payment to the Company of all federal, state, local and foreign taxes that are required by applicable laws

and regulations to be paid or withheld with respect to the Restricted Stock Units or the Award. In such event, or in the event that the Company determines that the cash proceeds from a Sell to Cover are insufficient to meet the Withholding Obligation, the Participant authorizes the Company and its subsidiaries to withhold such amounts from any amounts otherwise owed to the Participant, but nothing in this sentence shall be construed as relieving the Participant of any liability for satisfying his or her obligations under the preceding provisions of this Section.

(iv) The Participant hereby agrees to execute and deliver to the Agent or the Company any other agreements or documents as the Agent or the Company reasonably deem necessary or appropriate to carry out the purposes and intent of this Agreement, including without limitation, any agreement intended to ensure the Sell to Cover and the corresponding authorization and instruction to the Agent set forth in this Section 7(a) to sell Shares to satisfy the Withholding Obligation comply with the requirements of Rule 10b5-1(c) under the Exchange Act. The Agent is a third-party beneficiary of this Section 7(a).

(b) The Participant expressly acknowledges that because the Award consists of an unfunded and unsecured promise by the Company to deliver Shares in the future, subject to the terms hereof, it is not possible to make a so-called "83(b) election" with respect to the Award.

(c) This Award is intended to be exempt from Section 409A of the Code as a short-term deferral thereunder and shall be construed and administered in accordance with that intent. Notwithstanding the foregoing, in no event will the Company or any of its subsidiaries have any liability relating to the failure or alleged failure of any payment or benefit under this Agreement to comply with, or be exempt from, the requirements of Section 409A.

8. **Effect on Employment.** Neither the grant of this Award, nor the issuance of Shares upon the vesting of this Award, will give the Participant any right to be retained in the employ or service of the Company or any of its subsidiaries, affect the right of the Company or any of its subsidiaries to discharge the Participant at any time, or affect any right of the Participant to terminate his or her Employment at any time.

9. **Provisions of the Plan.** This Agreement is subject in its entirety to the provisions of the Plan, which are incorporated herein by reference. A copy of the Plan as in effect on the Date of Grant has been made available to the Participant. By accepting this Award, the Participant agrees to be bound by the terms of the Plan and this Agreement. In the event of any conflict between the terms of this Agreement and the Plan, the terms of the Plan will control.

10. **Acknowledgements.** The Participant acknowledges and agrees that (i) this Agreement may be executed in two or more counterparts, each of which will be an original and all of which together will constitute one and the same instrument; (ii) this Agreement may be executed and exchanged using facsimile, portable document format (PDF) or electronic signature, which, in

each case, will constitute an original signature for all purposes hereunder; and (iii) such signature by the Company will be binding against the Company and will create a legally binding agreement when this Agreement is countersigned by the Participant.

[Signature page follows.]

The Company, by its duly authorized officer, and the Participant have executed this Agreement as of the Date of Grant.

VAPOTHERM, INC.

By: _____

Name: _____

Title: _____

Agreed and Accepted:

By _____
Participant's Name

CONFIDENTIALITY, NON-COMPETE AND ASSIGNMENT OF INVENTIONS AGREEMENT

This CONFIDENTIALITY, NON-COMPETE AND ASSIGNMENT OF INVENTIONS AGREEMENT ("Agreement") is between Vapotherm, Inc., a Delaware corporation with a principal place of business at 100 Domain Drive, Exeter, NH 03833 (the "Company") and _____ ("Employee").

In consideration of the Employee's employment or continued employment by the Company, Employee's participation in the Company's bonus plan(s) and/or equity plan(s), Employee's receipt of bonuses and/or equity awards, Employee's eligibility for promotions and increases in compensation, Employee's access to and provision with Confidential Information and Trade Secrets belonging to the Company and/or any entity, individual, firm, or corporation, directly or indirectly, through one or more intermediaries, controlling, controlled by, or under common control with, the Company (collectively, its "Affiliates"), and for other good and sufficient consideration, Employee hereby agrees, as follows:

1. Assignment of Inventions.

(a) As used in this Agreement, the term "Inventions" includes, without limitation, electronic designs, hardware and software creations, discoveries, formulae, processes, manufacturing techniques, trade secrets, inventions, improvements, concepts, techniques, methods, systems, designs, circuits, cost data, computer programs, development or experimental work, work in progress, ideas and copyrightable or patentable works, including all rights to obtain, register, perfect and enforce these proprietary interests.

(b) Without further compensation, Employee hereby agrees promptly to disclose to the Company, and Employee hereby assigns and agrees to assign to the Company or its designee, Employee's entire right, title, and interest in and to all Inventions (as defined herein) which: (a) pertain to any line of business activity of the Company and/or its Affiliates, (b) are aided by the use of time, equipment, supplies, materials, facilities, services, or trade secrets of the Company and/or its Affiliates, or (c) relate to any of Employee's work during employment. Employee hereby waives and quitclaims to the Company any and all claims of any nature whatsoever that Employee now or hereafter may have for infringement for any Inventions so assigned to the Company. If in the course of employment, Employee uses in or incorporates into or permits the Company to use in or incorporate into a released or unreleased product, program, process, or machine of the Company and/or its Affiliates, an invention owned by Employee or in which Employee has an interest, the Company is hereby granted and shall have an exclusive royalty- free, irrevocable, worldwide license to make, have made, use, and sell that invention without restriction as to the extent of Employee's ownership or interest. No rights are hereby conveyed in Inventions, if any, made by Employee prior to employment which are identified on Schedule A hereto or in Inventions to which the Company enjoys no claim under applicable law. If no Schedule A is attached or no Inventions are identified on Schedule A, Employee represents and agrees that there are no prior Inventions.

(c) Employee agrees to perform, at Company expense, during and after employment, all acts deemed necessary or desirable by the Company to permit and assist the Company and/or its Affiliates, in obtaining and enforcing the full benefits, enjoyment, rights and title throughout the world in the Inventions hereby assigned to the Company. If Employee does not cooperate fully in signing documents, Employee hereby authorizes Company to execute on Employee's behalf as Employee's attorney in fact for the limited purpose of perfecting the Company's rights in such Inventions, as if Employee had signed the same himself or herself, any and all documents which are reasonably necessary to perfect the Company's rights in such Inventions.

2. Confidential Information and Trade Secrets.

(a) Employee agrees that during the course of employment with the Company, Employee has and will come into contact with and learn various forms of Confidential Information and Trade Secrets, which are the property of the Company and/or its Affiliates. This information relates to the Company and/or its Affiliates, their products, services, customers, vendors, data, and employees. As used in this Agreement, the term "Confidential Information" includes, without limitation: (i) financial and business information, such as information with respect to costs, commissions, fees, profits, sales, sales margins, capital structure, operating results, borrowing arrangements, strategies and plans for future business, pending projects and proposals, and potential acquisitions or divestitures; (ii) product and technical information, such as product formulations, new and innovative product ideas, research and development projects, investigations, experiments, clinical data, clinical trials, new business development, sketches, plans, drawings, prototypes, methods, procedures, devices, machines, equipment, manufacturing know-how, data processing programs, artificial intelligence platforms, software, software codes, algorithms, and computer models; (iii) marketing information, such as new marketing ideas, markets, mailing lists, the identity of the customers of the Company and/or its Affiliates, their names and addresses, the names of representatives of the Company's customers responsible for entering into contracts with the Company, the financial arrangements between such customers and the Company and/or its Affiliates, specific customer needs and requirements, and leads and referrals to prospective customers; (iv) supplier or vendor information, such as the identity of the suppliers and vendors of the Company and/or its Affiliates, their names and addresses, the names of representatives of the suppliers or vendors of the Company and/or its Affiliates that are responsible for entering into contracts with the Company and/or its Affiliates, the financial arrangements between the such suppliers or vendors of the Company and/or its Affiliates, specific supplier or vendor needs and requirements, and leads and referrals to prospective suppliers or vendors; and (v) personnel information, such as the identity and number of the other employees, consultants and contractors of the Company and/or its Affiliates, their salaries, bonuses, benefits, skills, qualifications, and abilities. As used in this Agreement, "Trade Secrets" are items of Confidential Information that meet the requirements of applicable federal or state trade secret law. Employee acknowledges and agrees that the Confidential Information and Trade Secrets are not generally known or available to the general public, but have been developed, compiled or acquired by the Company and/or its Affiliates at their great effort and expense. Confidential Information and Trade Secrets can be in any form: oral, written or machine readable, including electronic files.

(b) Employee acknowledges and agrees that the Company and/or its Affiliates are engaged in a highly competitive business and that their competitive position depends upon its ability to maintain the confidentiality of the Confidential Information and Trade Secrets which were developed, compiled and acquired by the Company and/or its Affiliates at great effort and expense. Employee further acknowledges and agrees that disclosing, divulging, revealing or using any of the Confidential Information or Trade Secrets, other than in connection with the business of the Company and/or its Affiliates or as specifically authorized by the Company, will be highly detrimental to the Company and/or its Affiliates, and that serious loss of business and pecuniary damage may result therefrom.

(c) Accordingly, Employee agrees, except as specifically required in the performance of Employee's duties on behalf of the Company or with prior written authorization of an officer or Vice President of the Company, Employee will not, while associated with the Company and for so long thereafter as the pertinent information or documentation remains confidential, directly or indirectly use, disclose or disseminate to any other person, organization or entity or otherwise use any Confidential Information or Trade Secrets. Nothing in this Agreement is intended to prohibit Employee from discussing with other employees, or with third parties who are not future employers or competitors of the Company and/or its Affiliates, Employee's wages, hours or other terms and conditions of employment. Under the federal Defend Trade Secrets Act of 2016, Employee shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (a) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made to Employee's attorney in relation to a lawsuit for retaliation against Employee for reporting a suspected violation of law; or (c) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

(d) Employee further agrees to deliver to the Company, immediately upon separation from employment and at any time the Company so requests, (i) any and all documents, files, notes, memoranda, databases, computer files and/or other computer programs reflecting any Confidential Information and Trade Secrets whatsoever or otherwise relating to the business of the Company and/or its Affiliates; (ii) lists of customers, or leads or referrals to prospective customers, of the Company and/or its Affiliates; and (iii) any computer equipment, home office equipment, automobile or other business equipment belonging to the Company and/or its Affiliates that Employee may then possess or have under his or her control. For any equipment or devices owned by Employee on which proprietary information of the Company and/or Affiliates is stored or accessible, Employee shall, immediately upon or prior to separation from employment, deliver such equipment or devices to the Company so that any proprietary information may be deleted or removed. Employee expressly authorizes the Company's designated representatives to access such equipment or devices for this limited purpose and shall provide any passwords or access codes necessary to accomplish this task.

3. Non-Competition.

(a) Employee acknowledges and agrees that the Company and/or its Affiliates are engaged in a highly competitive business and that by virtue of Employee's position and responsibilities with the Company and Employee's access to the Confidential Information and Trade Secrets, engaging in a business which is directly competitive with the Company and/or its Affiliates will cause them great and irreparable harm.

(b) Accordingly, Employee covenants and agrees that so long as Employee is employed by the Company and for a period of twelve (12) months after such employment ends, whether voluntarily or involuntarily, Employee will not, without the express written consent of an officer or Vice President of the Company, directly or indirectly, own, manage, operate or control, or be employed in a capacity similar to the position(s) held by Employee with the Company within the last two years of employment with the Company, by any company or entity engaged in such segment(s) of the Business of the Company and/or its Affiliates for which Employee had responsibility or about which Employee had knowledge of or access to Confidential Information and Trade Secrets while employed by the Company. For purposes of this Agreement, the "Business" of the Company and/or its Affiliates means the provision of medical products, software, and/or services, including but not limited to medical products, software, and/or services to support, treat, monitor, and/or manage patients' respiratory needs. In recognition of the national nature of such Business, which includes the intended sale and/or sale of products and services nationwide, this restriction shall apply to any state in which the employee worked in the last two years, any state contiguous to those states, and throughout the United States.

4. Non-Solicitation Of Customers.

(a) Employee acknowledges and agrees that solely by reason of employment by the Company, Employee has and will come into contact with a significant number of customers of the Company and/or its Affiliates (including but not limited to hospitals; hospital systems; group purchasing organizations; integrated delivery networks; durable medical equipment companies; medical distribution companies; government, private, and self-insured health insurance providers; and individuals such as physicians, respiratory therapists, and nurses, in their individual capacities or through their private medical practices) and prospective customers, and will have access to Confidential Information and Trade Secrets regarding the customers and prospective customers of the Company and/or its Affiliates and related information, including but not limited to information regarding customer contacts and representatives, customer needs and requirements and financial arrangements with customers. Employee acknowledges and agrees that any and all goodwill that he or she develops with any customers or prospective customers shall be the sole, exclusive and permanent property of the Company and/or its Affiliates, and shall continue to be such after the termination of Employee's employment, whether voluntarily or involuntary.

(b) Consequently, Employee covenants and agrees that for a period of twelve (12) months after employment with the Company ends, whether voluntarily or involuntarily, Employee will not directly or indirectly service, accept business from, or solicit customers or prospective customers of the Company and/or its Affiliates for the purpose of selling products and services of the type for which Employee had responsibility or knowledge of or access to Confidential Information and Trade Secrets while employed by the Company. This restriction shall apply only to those customers or prospective customers of the Company and/or its Affiliates with whom Employee had contact during the two (2) years prior to the termination of his or her employment from the Company. For the purposes of this Section, the term "contact" means interaction between Employee and the customer which takes place to further the business relationship, or making sales to or performing services for the customer or prospective customer on behalf of the Company and/or its Affiliates. For purposes of this Section, the term "contact" with respect to a "prospective" customer means interaction between Employee and a potential customer of the Company and/or its Affiliates which takes place to obtain the business of the potential client on behalf of the Company and/or its Affiliates.

5. Non-Solicitation Of Employees, Contractors, Consultants, Suppliers and Vendors.

(a) Employee acknowledges and agrees that solely as a result of employment with the Company, and in light of the broad responsibilities of such employment which include working with other employees, contractors, consultants, suppliers and vendors of the Company and/ or its Affiliates, Employee has and will come into contact with and acquire Confidential Information and Trade Secrets regarding other employees, contractors, consultants, suppliers and vendors of the Company and/or its Affiliates, and will develop relationships with those employees, contractors, consultants, suppliers and vendors.

(b) Accordingly, Employee covenants and agrees that for so long as Employee is employed by the Company and for a period of twelve (12) months after such employment ends, whether voluntarily or involuntarily, Employee shall not, either on Employee's own account or on behalf of any person, company, corporation, or other entity, directly or indirectly, solicit any employee, contractor, consultant, supplier or vendor of the Company and/or its Affiliates to leave employment with or service to the Company and/or its Affiliates, or diminish their services to the Company and/or its Affiliates. This restriction shall apply only to those employees, contractors, consultants, suppliers and vendors of the Company and/or its Affiliates with whom Employee came into contact during the last two (2) years of his or her employment with the Company.

6. Conflicts of Interest. During employment with the Company, Employee may not use his or her position, influence, knowledge of Confidential Information or Trade Secrets or the assets of the Company and/or its Affiliates for personal gain, except as specifically provided in this Agreement. A direct or indirect financial interest, including joint ventures in or with a supplier, vendor, customer or prospective customer without disclosure and the express written approval of an officer or Vice President of the Company, is strictly prohibited during employment with the Company.

7. Exclusion from Healthcare Programs. Employee represents and warrants that Employee is not: (i) excluded, suspended, or debarred from participating in Medicare, Medicaid, or any federal, state or local health care program, or any international equivalent (collectively, "Healthcare Program"), or (ii) under investigation for any action that might result in Employee's exclusion, suspension, or debarment from participating in any Healthcare Program. Employee agrees to notify the Company immediately upon notice to Employee relating to Employee's exclusion, suspension, or debarment from any Healthcare Program or any investigation that might result in the same.

8. Enforcement. Employee acknowledges and agrees that compliance with the covenants set forth in this Agreement is necessary to protect the Confidential Information and Trade Secrets, business and goodwill of the Company and/or its Affiliates, and that any breach of this Agreement will result in irreparable and continuing harm to the Company and/or its Affiliates, for which money damages may not provide adequate relief. Accordingly, in the event of any breach or anticipatory breach of this Agreement by Employee, the parties agree that the Company and/or its Affiliates shall be entitled to injunctions, both preliminary and permanent, enjoining or restraining such breach or anticipatory breach, and Employee hereby consents to the issuance thereof forthwith and without bond by any court of competent jurisdiction. In addition, in the event of any breach or anticipatory breach of this Agreement by Employee, any grant of temporary, preliminary, or permanent injunctive relief, against Employee, or Employee's claim in a

declaratory judgment action that all or part of this Agreement is unenforceable, the parties agree that the Company and/or its Affiliates shall be entitled to recovery of all reasonable sums and costs, including attorneys' fees, incurred by the Company and/or its Affiliates in defending or seeking to enforce the provisions of this Agreement, in addition to any remedies otherwise available to it at law or equity.

9. **Extension of Restrictive Periods**. The restrictive period set forth in Section 3 of this Agreement shall be tolled for a period of up to twenty-four (24) months after employment with the Company ends if Employee breaches a fiduciary duty to the Company or takes any property of the Company and/or its Affiliates, including electronic data, in violation of this Agreement or applicable law. The restrictive periods set forth in Sections 4 and 5 hereof shall not expire and shall be tolled during any period in which Employee is in violation of such restrictions, and therefore such restrictive periods shall be extended for a period equal to the duration of Employee's violations thereof.

10. **Disclosure of Agreement; Disclosure of New Employment.** Employee covenants and agrees that he or she will promptly disclose the existence of this Agreement and the post-employment restrictions contained herein to all subsequent employers until all such covenants have expired. Employee further covenants and agrees that he or she will promptly inform the Company in writing of all employment or business ventures in which Employee becomes engaged (other than employment by the Company) until all post-employment restrictions contained herein expire.

11. **Confidential Information Belonging to Others.** Employee affirms he or she is not presently subject to a restrictive covenant or other contract or agreement of any kind which would prohibit, restrict or limit employment with the Company. If Employee learns or becomes aware or is advised that he or she is subject to an actual or alleged restrictive covenant or other prior agreement which may prohibit or restrict employment by the Company, Employee shall immediately notify the Company of the same. Employee agrees that he or she shall not disclose of the Company and/or its Affiliates, use for the benefit of the Company and/or its Affiliates, or induce the Company and/or its Affiliates to use any trade secret or confidential information he or she may possess or any intellectual property belonging to any former employer or other third party.

12. **Employment At-Will.** Employment with the Company is not for any specific duration or period of time. Employee is an employee at-will of the Company. The employment relationship between Employee and the Company may be terminated by either Employee or the Company at any time, with or without cause and with or without notice.

13. **Non-disparagement**. Unless otherwise permitted by law, Employee shall not make nor cause others to make any false, disparaging or derogatory statements in public or private to any person, entity or media outlet regarding the Company or any of its directors, officers, employees, agents or representatives or the Company's business affairs and financial condition.

14. **Modifications**. This Agreement may be amended, modified and supplemented only by written agreement of the parties hereto, wherein specific reference is made to this Agreement, or as provided in Section 15 ("Severability") below.

15. **No Waiver**. No failure or delay on the part of any party in exercising any right, power or remedy hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any such right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy hereunder. Any waiver by the Company or by Employee must be in writing and signed by either Employee, if Employee is seeking to waive any of his or her rights under this Agreement, or by an officer or Vice President of the Company, if the Company is seeking to waive any of its rights under this Agreement.

16. **Severability**. The parties agree they have attempted to limit the scope of the post-employment restrictions contained herein to the extent necessary to protect the Confidential Information and Trade Secrets, customer relationships and goodwill of the Company and/or its Affiliates. In the event that any provision hereof would, under applicable law, be invalid or unenforceable, such provision shall be deemed modified so as to render it valid and enforceable to the maximum extent possible under applicable law. The terms and provisions of this Agreement are severable, and in the event that any term or provision hereof should be held invalid or unenforceable and such term or provision or portion thereof cannot be rendered valid and enforceable, this Agreement shall be considered divisible as to such provision which shall become null and void, leaving the remainder of this Agreement in full force and effect.

17. **Successors and Assigns**. This Agreement shall be binding upon the Company, and its Affiliates, successors and assigns, and inure to the benefit of the Company and its Affiliates, successors and assigns. The Company may assign its rights under this Agreement in connection with any sale, transfer of other disposition of all or a substantial portion of the stock or assets of the Company. This Agreement may be enforced by the Company's Affiliates, successors and assigns. This Agreement shall be binding upon Employee, Employee's heirs, executors and administrators. Employee may not assign Employee's duties or obligations hereunder. The obligations under this Agreement also shall survive any changes made in the future to the employment terms of Employee, including but not limited to changes in salary, benefits, bonus plans, job title and job responsibilities.

18. **Governing Law and Choice of Forum.** This Agreement shall be interpreted and enforced in accordance with the laws of the State of Delaware, without reference to its choice of law provisions. The parties agree that any legal action or proceedings brought upon by or against them with respect to this Agreement shall be brought exclusively in Rockingham Superior Court in New Hampshire or in the U.S. District Court for the District of New Hampshire and, by execution and delivery hereof, the parties hereby irrevocably submit to each such jurisdiction and hereby irrevocably waive any and all objections which they may have with respect to venue in any of the above courts.

19. **Miscellaneous**. Employee acknowledges that Employee has had a full and reasonable opportunity to review and consider the terms of this Agreement and to consult with his own independent legal counsel before signing this Agreement. This Agreement may be signed in one or more counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same agreement. The descriptive headings herein are inserted for convenience of reference only.

20. **Entire Agreement.** This Agreement and the attached Schedule A contain the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, oral or written, between the parties. Employee acknowledges that he or she has not relied on any representations, promises, or agreements of any kind made to Employee in connection with Employee's decision to sign this Agreement, except for those set forth in this Agreement.

(signatures on next page)

IN WITNESS WHEREOF, the parties have knowingly and voluntarily executed this Confidentiality, Non-Compete, and Assignment of Inventions Agreement as of the date set forth below.

Date: _____ By: _____

Name:

VAPOTHERM, INC.

Date: _____ By: _____

Name:

Title:

Schedule A

The following "Inventions," as that term is defined in the Agreement to which this Attachment is affixed, if any, are claimed by Employee (if none, please write N/A in section below):

Signature of Employee: _____

Print Name of Employee: _____

Date: _____

Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

Name of Subsidiary	State or Other Jurisdiction of Incorporation or Organization	Direct/Indirect Ownership Interest	Names Under Which Subsidiary Does Business
HGE Health Care Solutions, LLC	Delaware	100%	Vapotherm Access
Solus Medical Limited	Scotland	100%	Same as Subsidiary Name
Vapotherm Access Care Management Network, LLC	Delaware	100%	Vapotherm Access
Vapotherm Access Management Services, LLC	Oklahoma	100%	Vapotherm Access
Vapotherm Deutschland GmbH	Frankfurt am Main Germany	100%	Same as Subsidiary Name

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated February 24, 2022, with the respect to the consolidated financial statements and internal control over financial reporting included in the Annual Report of Vapotherm, Inc. on Form 10-K for the year ended December 31, 2021. We consent to the incorporation by reference of the said reports in the Registration Statements of Vapotherm, Inc. on Form S-3 (File No. 333-235657) and on Form S-8 (File No. 333-236953, File No. 333-253597 and File No. 333-229327).

/s/ GRANT THORNTON LLP

New York, New York
February 24, 2022

Exhibit 31.1

CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Joseph Army, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2021 of Vapotherm, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2022

By: /s/ JOSEPH ARMY
Joseph Army
President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John Landry, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2021 of Vapotherm, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2022

By: /s/ JOHN LANDRY
John Landry
Senior Vice President and Chief Financial Officer
(principal financial officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K for the fiscal year ended December 31, 2021 of Vapotherm, Inc. (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 24, 2022

By: /s/ Joseph Army
Joseph Army
President and Chief Executive Officer
(principal executive officer)

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K for the fiscal year ended December 31, 2021 of Vapotherm, Inc. (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 24, 2022

By: /s/ JOHN LANDRY
John Landry
Senior Vice President and Chief Financial Officer
(principal financial officer)

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.