SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

☒ 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

Commission File Number 001-35280

VERICEL CORPORATION

(Exact name of registrant as specified in its charter)

Michigan	**94-3096597**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

64 Sidney Street
Cambridge, MA 02139
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: **(617) 588-5555**

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

Title of Class	**Trading Symbol(s)**	**Name of Each Exchange on Which Registered**
Common Stock (No par value)	VCEL	NASDAQ

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 x No o

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No x

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 x No o

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 x No o

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

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

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

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. 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 Exchange Act). Yes ☐ No x

The aggregate market value of the registrant's Common Stock, no par value per share ("Common Stock"), held by non-affiliates of the registrant (based on the closing sales price of the Common Stock as reported on the NASDAQ Capital Market) on June 30, 2021 was approximately $2,430,875,370. This computation excludes shares of Common Stock held by each executive officer and director who may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 18, 2022, 46,967,681 shares of Common Stock, no par value per share, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Document	**Form 10-K Reference**
Proxy Statement for the Annual Meeting of Shareholders scheduled for April 27, 2022	Items 10, 11, 12, 13 and 14 of Part III

VERICEL CORPORATION
ANNUAL REPORT ON FORM 10-K
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Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K, including the documents incorporated by reference herein, contains certain statements that describe our management's beliefs concerning future business conditions, plans and prospects, growth opportunities and the outlook for our business based upon information currently available. Such statements are "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Wherever possible, we have identified these forward-looking statements by words such as "will," "may," "anticipates," "believes," "intends," "estimates," "expects," "plans," "projects," "trends," "opportunity," "current," "intention," "position," "assume," "potential," "outlook," "remain," "continue," "maintain," "sustain," "seek," "target," "achieve," "continuing," "ongoing," and similar words or phrases, or future or conditional verbs such as "would," "should," "could," "may," or similar expressions. These forward-looking statements are based upon assumptions our management believes are reasonable. Such forward-looking statements are subject to risks and uncertainties which could cause our actual results, performance and achievements to differ materially from those expressed in, or implied by, these statements, including, among others, the risks and uncertainties listed in this Annual Report on Form 10-K under "Part I, Item 1A Risk Factors."

Because our forward-looking statements are based on estimates and assumptions that are subject to significant business, economic and competitive uncertainties, many of which are beyond our control or are subject to change, actual results could be materially different and any or all of our forward-looking statements may turn out to be wrong. Forward-looking statements speak only as of the date made and can be affected by assumptions we might make or by known or unknown risks and uncertainties. Many factors mentioned in our discussion in this Annual Report on Form 10-K will be important in determining future results. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. Consequently, we cannot assure you that our expectations or forecasts expressed in such forward-looking statements will be achieved. Except as required by law, we undertake no obligation to publicly update any of our forward-looking or other statements, whether as a result of new information, future events, or otherwise.

Except for the historical information presented, the matters discussed in this Annual Report, including our product development and commercialization goals and expectations, our plans and anticipated timing and results of clinical and regulatory development activities, potential market opportunities, revenue expectations and the potential advantages and applications of our products and product candidates under development, include forward-looking statements that involve risks and uncertainties. Our actual results may differ significantly from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed under the caption "Risk Factors." Unless the context requires otherwise, references to "Vericel," "the Company," "our company," "we," "us," and "our" refer to Vericel Corporation.

We own various trademark registrations and applications, and unregistered trademarks, including Vericel Corporation, Epicel, MACI and our corporate logo. All other trade names, trademarks and service marks of other companies appearing in this Form 10-K are the property of their respective holders, including NexoBrid, which is a registered trademark of MediWound Ltd. Solely for convenience, the trademarks and trade names in this document may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend to use or display other companies' trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

SUMMARY OF THE MATERIAL RISKS ASSOCIATED WITH OUR BUSINESS

- We have incurred losses and may not achieve consistent profitability for some time or at all.
- Future sales of shares of common stock could have an adverse effect on the market price of such shares.
- We may not be able to raise the required capital to develop and commercialize our future product candidates and otherwise grow and expand our business.
- Our operating results will be harmed if we are unable to effectively manage and sustain our future growth or scale our operations.
- Seasonal sales patterns and other variations related to our revenue recognition may cause significant fluctuations in our results of operations and cash flows and may prevent us from achieving our quarterly or annual forecasts, which may cause our stock price to decline.
- Current financial market conditions may exacerbate certain risks affecting our business.

- We are dependent on our key manufacturing, quality and other management personnel and the loss of any of these individuals could harm our business.
- Failure to obtain and/or maintain required regulatory approvals would severely limit our ability to sell our products.
- Any changes in the regulatory requirements that affect our products and/or future product candidates could prevent, limit or delay our ability to market or develop new product candidates.
- The ongoing COVID-19 pandemic and the potential future outbreak of other highly infectious or contagious diseases, could seriously harm our research, development, commercialization and sales efforts, increase our costs and expenses and have a material adverse effect on our business, financial condition and results of operations, including delaying regulatory authorities' ability to review and/or inspect required facilities or submissions.
- The Federal Government may, in the future, commandeer materials or manufacturing facilities for the production of COVID-19 vaccines or therapeutics, making it more difficult for us to obtain materials or manufacturing supplies needed for our preclinical studies or clinical trials or for our commercial product, which could lead to delays in studies, trials, or our commercial supply.
- If our manufacturing facility is destroyed or we experience any manufacturing difficulties, disruptions or delays, this could limit supply of our products or adversely affect our ability to conduct clinical trials and our business would be adversely impacted.
- If we do not manage inventory in an effective and efficient manner, it could adversely affect our results of operations.
- Failure of third parties, including for example Matricel GmbH ("Matricel"), to manufacture or supply certain components, equipment, disposable devices and other materials used in our MACI® or Epicel® cell manufacturing processes would impair our cell product development and commercialization.
- Because our manufacturing and supply chain are subject to significant regulations, failure by our third-party manufacturers, including Matricel, to comply with the regulatory requirements set forth by the FDA with respect to our products could limit our ability to manufacture commercial products and/or result in the products being subject to restrictions or withdrawn from the market.
- Changes to our products or future product candidates may require regulatory approvals which could result in the delay of the change being made or, if not approved, prevent any changes from being made.
- Failure to obtain adequate reimbursement and reimbursement rates for our products could have a material adverse effect on our financial condition and operating results.
- NexoBrid® may not be approved for treatment of severe burns in the U.S. and other North American markets, or its approval may be materially delayed, and there is no guarantee that NexoBrid will be accepted in the market, even if regulatory approval is received.
- Our licensor MediWound Ltd. is dependent on a contract with the U.S. Biomedical Advanced Research and Development Authority ("BARDA") to fund clinical trials and other development activities of NexoBrid in the U.S. and these contracts may be terminated by BARDA at any time.
- If any federal or state agency determines that we have promoted the off-label use of our products and/or we have violated anti-kickback or other anti-bribery laws, we may be subject to various penalties, including civil or criminal penalties, and the off-label use of our products may result in injuries that lead to product liability lawsuits, which could be costly to our business.

PART I

Item 1. *Business*

General Information

Vericel Corporation is a fully-integrated, commercial-stage biopharmaceutical company and is a leader in advanced therapies for sports medicine and severe burn care markets. We currently market two FDA-approved autologous cell therapy products in the U.S. MACI® (autologous cultured chondrocytes on porcine collagen membrane) is an autologous cellularized scaffold product indicated for the repair of symptomatic, single or multiple full-thickness cartilage defects of the knee with or without bone involvement in adults. Epicel® (cultured epidermal autografts) is a permanent skin replacement Humanitarian Use Device ("HUD") for the treatment of adult and pediatric patients with deep-dermal or full-thickness burns comprising greater than or equal to 30 percent of total body surface area ("TBSA"). We also hold an exclusive license from MediWound Ltd. ("MediWound") for North American rights to NexoBrid® (concentrate of proteolytic enzymes enriched in bromelain), a registration-stage biological orphan product for debridement of severe thermal burns. In 2020, MediWound submitted to the U.S. Food and Drug Administration ("FDA") a Biologics License Application ("BLA") seeking the approval of NexoBrid for eschar removal (debridement) in adults with deep partial-thickness and/or full-thickness thermal burns. The FDA accepted the BLA for filing and assigned a Prescription Drug User Fee Act ("PDUFA") target date of June 29, 2021. Thereafter, on June 29, 2021, MediWound received a complete response letter from the FDA regarding the BLA, through which the FDA communicated to MediWound that it had completed its review of the BLA, as amended, and had determined that it could not approve the BLA in its present form. We continue to work with MediWound, BARDA and the FDA to address the issues identified by the FDA, to prepare and submit a BLA resubmission to the FDA, and to seek the potential approval of NexoBrid.

Our Strategy

Our objective is to become the leading developer in advanced therapies for the sports medicine and severe burn care markets. To achieve this objective, we intend to:

- Increase MACI revenue by increasing the number of surgeons implanting MACI and the average number of implants per surgeon, seek to expand the clinical indications for which the MACI procedure is approved, and optimizing the ease of use of the MACI procedure for surgeons;
- Increase Epicel revenue by expanding the number of burn centers and surgeons consistently using Epicel;
- Commercialize and market NexoBrid for burn patients requiring debridement, should the FDA approve the NexoBrid BLA; and
- Generate operating income by keeping the growth in commercial expense lower than the growth in revenue.

COVID-19

The ongoing pandemic caused by the spread of a novel strain of coronavirus (COVID-19) has created significant disruptions to the U.S. and global economy and has contributed to significant volatility in financial markets. The global impact of the pandemic has fluctuated since early 2020. At times, many state, local and national governments – including those in Massachusetts and Michigan, where our operations are located – have responded by issuing, extending and supplementing orders requiring quarantines, restrictions on travel, and the mandatory closure of certain non-essential businesses, among other actions. In the U.S., the status and application of these orders have varied on a state-by-state basis since the early days of the pandemic. Many of the restrictions have been periodically updated as infection rates in the U.S. have risen and fallen, as new virus variants have emerged, as vaccines have been distributed and administered, and as world health leaders learn more about the virus, its transmission pathway and who is most at risk. Because Vericel is deemed an essential business, we were exempted from government orders requiring the closure of workplaces and the cessation of business operations.

Notwithstanding being an essential business, our business and operations at times have been adversely impacted by the effects of the COVID-19 pandemic. For example, as a result of periodic restrictions placed on the performance of elective surgical procedures, we experienced a significant increase in cancellations of scheduled MACI procedures, as well as a slowdown in new MACI orders during March and April of 2020. The widespread suspension of surgical procedures impacted our business and operations during the first and second quarters of 2020. The level and degree of restrictions on elective surgeries, on the ability of patients to seek treatment and on U.S. business operations generally fluctuated throughout 2020 as COVID-19 infection rates rose and fell during the summer months and into the autumn. By the first quarter of 2021, the pandemic's effects on our MACI business had largely dissipated. During the summer of 2021, however, the pandemic's direct

and ancillary effects again began to cause some disruption to our MACI business. Following the cessation of COVID-19-related travel restrictions in many parts of the U.S. and the availability of vaccinations in May and June 2021, some MACI patients postponed or delayed treatment – opting instead to take vacation and/or travel. Further, surges of new COVID-19 cases during the second half of 2021 caused by the spread of the "Delta" and "Omicron" variants again caused disruptions to health care networks including restrictions on the performance of elective surgical procedures, the availability of physicians and/or their treatment prioritizations, the level of healthcare facility staffing and, in some instances, the willingness or ability of patients to seek treatment. Consequently, and notwithstanding the widespread distribution of vaccines, these factors contributed to a slowdown of MACI procedures during the third and fourth quarters of 2021. Although hospitals are now better prepared for subsequent surges in COVID-19 patients, the risk remains that regional or local restrictions could again be placed on the performance of elective surgical procedures if the number of COVID-19 infections in the U.S. were to rise, or if new or existing COVID-19 variants render current vaccine treatments ineffective or less effective.

Because Epicel is used almost exclusively in an emergent setting by burn centers and surgeons throughout the country, Epicel revenue and procedure volumes have been less affected by the pandemic. Nevertheless, large burns and burn admissions can be affected by restrictions on human activity resulting from more severe government lockdown orders.

At the outset of the pandemic, we put in place a comprehensive workplace protection plan, which instituted protective measures in response to COVID-19. Our workplace protection plan has closely followed guidance issued by the Centers for Disease Control and Prevention ("CDC") and has complied with applicable federal and state law. To date, we have been successful in sustaining our operations and providing MACI and Epicel to patients in need. We continue to review our policies and procedures regularly, including our workplace protection plan, as the pandemic evolves and we may take additional actions to the extent required.

We continue to manufacture MACI and Epicel and we are maintaining a significant safety stock of all key raw materials. We do not expect current supply chain interruptions will impact our ongoing manufacturing operations. With respect to customer delivery, MACI final product has an established shelf life of six (6) days and an established shipping shelf life of three (3) days. Currently, MACI is picked up by courier and shipped by commercial air or ground transportation to customer surgical sites. Epicel final product has an established shelf life of 48 hours and is hand carried to customer hospitals by courier. Transportation is primarily by commercial or charter airline. Although we have not experienced material shipping delays or materially increased costs to date, significant disruption of air travel could result in the inability to deliver MACI or Epicel final products to customer sites within appropriate timeframes, which could further adversely impact our business. At this time, we are not aware of COVID-19 related impacts on our distributors, operations or third-party service providers' ability to manage patient cases.

We believe it is possible that we could continue to experience variable impacts on our business, should the current resurgence of COVID-19 in various areas of the U.S. continue for an extended period, or should a new resurgence occur in the future. Measures taken to limit the impact of COVID-19 at the international, national and local levels, including the availability and effectiveness of COVID-19 vaccines, shelter-in-place orders, social distancing measures, travel bans and restrictions, and business and government shutdowns, may again create significant negative economic impacts on a global basis. Given that uncertainty, we cannot reliably estimate the extent to which the ongoing COVID-19 pandemic may continue to impact utilization and revenue of our products in 2022 and beyond.

For a discussion of additional risks associated with the ongoing COVID-19 pandemic, please see Part I, Item 1A. "Risk Factors".

Product Portfolio

Our marketed products include two FDA-approved autologous cell therapies: MACI, a third-generation autologous cellularized scaffold product indicated for the repair of symptomatic, single or multiple full-thickness cartilage defects of the knee with or without bone involvement in adults, and Epicel, a permanent skin replacement for the treatment of adult and pediatric patients with deep-dermal or full-thickness burns comprising greater than or equal to 30 percent of TBSA. Both products are currently marketed in the U.S. In addition, we have entered into exclusive license and supply agreements with MediWound to commercialize NexoBrid in North America, following potential regulatory approval. As previously mentioned, MediWound submitted a BLA to the FDA, seeking commercial approval of NexoBrid. On June 29, 2021, we announced that MediWound had received a complete response letter from the FDA in response to the BLA and that we are committed to working with both MediWound and the FDA to address the items raised by the agency and seek the potential approval of NexoBrid through a BLA resubmission.

MACI

Background of Cartilage Defects

Damage to cartilage in the knee can occur from acute or repetitive trauma from playing sports, exercising, work-related physical demands, or performing everyday activities. When damaged, cartilage in the knee does not usually heal on its own. If left untreated, cartilage defects can progress and lead to degenerative joint disease, osteoarthritis and potentially require total knee replacement, which is a poor option for younger and more active patients.

For patients diagnosed with cartilage defects, there are several treatment options, including arthroscopic debridement/chondroplasty, marrow stimulation techniques such as microfracture (a minimally invasive procedure that can be performed arthroscopically), osteochondral autografts for smaller cartilage injuries, osteochondral allografts, and autologous chondrocyte implantation ("ACI"). Allogeneic tissue-derived products are also used to treat cartilage defects. These products, which are subject to human tissue regulation, include DeNovo® NT (marketed by Zimmer Holdings, Inc. ("Zimmer Biomet")), Cartiform® (manufactured and distributed by Osiris (recently acquired by Smith & Nephew) and marketed by Arthrex) and Prochondrix® (marketed by Stryker). Products subject only to FDA human tissue regulations are not required to obtain a Biologics License prior to being marketed. Products, like MACI, which must meet the requirements for a BLA before being marketed, are required to demonstrate clinical efficacy equal or superior to a standard of care.

Carticel was the first FDA-approved autologous cartilage repair product for the repair of symptomatic cartilage defects and was indicated for the repair of symptomatic cartilage defects of the femoral condyle (medial, lateral or trochlea) caused by acute or repetitive trauma, in patients who have had an inadequate response to a prior arthroscopic or other surgical repair procedure such as debridement (the removal of damaged or defective cartilage), microfracture (the creation of tiny fractures in the bone to encourage new cartilage), drilling/abrasion arthroplasty, or osteochondral allograft/autograft. Carticel received a BLA approval in 1997, and was marketed in the U.S. until the second quarter of 2017. The FDA approved MACI on December 13, 2016.

MACI is an autologous cellular scaffold product consisting of autologous cultured chondrocytes seeded onto a resorbable Type I/III porcine-derived collagen membrane. Autologous cultured chondrocytes are human-derived cells which are obtained from a sample of the patient's own cartilage for the manufacture of MACI. An orthopedic surgeon obtains the sample by taking a cartilage biopsy during an initial arthroscopic procedure. We isolate the patient's chondrocytes (the cells that produce cartilage) from the biopsy and expand those cells in a manufacturing process compliant with current Good Manufacturing Practices ("cGMP"). The expanded cells are then uniformly seeded onto a resorbable collagen membrane using a proprietary process prior to shipment. After receipt by the surgeon, MACI is implanted into the cartilage defect(s). A key driver of ACI's therapeutic advantage relative to other approaches, such as microfracture, is that autologous chondrocytes have the potential to produce the hyaline-like cartilage that is naturally present in the knee, rather than fibrous cartilage, which lacks the durability and wear characteristics of hyaline cartilage. Unlike Carticel, which was a cell suspension and required a membrane to be sutured in place to confine the cell suspension to the defect area, MACI is comprised of cells uniformly seeded on a collagen membrane resulting in a surgery that is simpler than that with Carticel. MACI may be implanted through a smaller incision or mini arthrotomy for focal defects. By using specialized instruments, MACI is simply trimmed by the surgeon to the size of the defect, allowing for a precise fit, and fixed to the bone with an off-the-shelf surgical fibrin sealant. MACI has expanded the ACI market since MACI shares the efficacy advantages of Carticel, while being less invasive, having a shorter procedure time, and eliminating the need for a periosteal harvest and suture fixation of the periosteal patch. In addition, MACI is indicated for a broader range of cartilage defects of the knee, ensures more uniform distribution of the cells in the cartilage defect, and is supported by Phase 3 clinical data demonstrating a statistically significant improvement in pain and function scores compared to microfracture.

The pivotal clinical trial supporting MACI registration in Europe and approval in the U.S., the Superiority of MACI Implant versus Microfracture Treatment in patients with symptomatic articular cartilage defects in the knee ("SUMMIT") trial, was completed in 2012. Analysis of this 144 patient study demonstrated at Week 104 a statistically significant greater improvement in the co-primary endpoint of pain and function for those patients treated with MACI compared to microfracture.

MACI became commercially available in the European Union (the "EU") in 2001 and in Australia in 2002, prior to promulgation of regulations requiring marketing authorizations for cell therapies in those markets. MACI received marketing authorization in Europe in June 2013, by meeting the requirements of the Advanced Therapy and Medicinal Product ("ATMP") guidelines based on the results of the SUMMIT trial in which MACI was manufactured at, and supplied from, our Cambridge, Massachusetts site. We suspended the marketing of MACI in Europe in September 2014, primarily due to an unfavorable pricing environment. Lifting of the suspension would have required the registration of a new manufacturing facility in Europe

prior to the five year renewal deadline of June 2018, which was not feasible. Consequently, the European manufacturing authorization for MACI expired by its terms at the end of June 2018. Australian operations and the commercialization of MACI in that country was discontinued prior to our acquisition of the product in 2014.

Market Opportunity for MACI

According to a 2018 external market study, approximately 750,000 patients undergo cartilage repair procedures of the knee annually in the U.S. Of these, approximately 315,000 patients are consistent with the current MACI label. Based on defect characteristics, doctors that have implanted MACI consider approximately 125,000 of these patients clinically appropriate for MACI. Approximately 60,000 of these eligible patients have larger lesions and are likely to secure insurance authorization for MACI.

In the U.S., the target audience of physicians that repair cartilage defects consists of approximately 5,000 orthopedic surgeons and is divided into two segments - a group of orthopedic surgeons who self-identify and/or have a formal specialty as sports medicine physicians, and a sub-population of general orthopedic surgeons who perform a high volume of cartilage repair procedures. Over the past 13 months, we have increased the number of MACI sales representatives to 76 Clinical Account Specialists and expanded their reach to over nine geographical regions to enable the sales force to call on 2,000 of the general orthopedic surgeons. Most private payers have a medical policy that covers treatment with MACI, with the top 30 largest commercial payers having a formal medical policy for MACI or ACI in general. Even for private payers that have not yet approved a medical policy for MACI, for medically appropriate cases, we often obtain approval on a case-by-case basis.

The effects of the ongoing COVID-19 pandemic disrupted the normal seasonality of our MACI business. These effects included, among others, the temporary limitation of elective surgical procedures throughout the country, staffing shortages throughout the healthcare industry, the inability of our Clinical Account Specialists to call on surgeon customers and temporary fluctuations in the number of patients seeking treatment for cartilage damage. In previous years, the volume of our MACI business has varied significantly by quarter due to several factors including insurance deductible limits and the time of year patients prefer to start rehabilitation. Over the last five years, ACI (MACI and Carticel prior to its replacement) sales volumes from the first through the fourth quarter have on average represented 19% (16%-21% range), 22% (16%-25% range), 23% (21%-26% range) and 36% (33%-38% range) respectively, of total annual volumes. The widespread effects of the COVID-19 pandemic impacted the seasonality in 2021 and 2020.

Seasonal sales patterns and other variations related to our revenue recognition may cause significant fluctuations in our results of operations and cash flows. We expect to continue to experience this seasonality effect in subsequent years.

As discussed more fully above, MACI is currently implanted into the patient’s cartilage defect through an open surgical procedure. We are currently evaluating the potential for the arthroscopic delivery of MACI to the cartilage defect – a procedure in which a surgeon can evaluate, prepare and treat the defect under direct vision using specialized instruments delivered through a number of smaller incisions or portals. The arthroscopic delivery of MACI could increase the ease of MACI’s use for physicians and reduce both the length of the procedure and a patient’s post-operative pain and recovery. We are currently developing specialized instruments to be used in such a procedure and intend to discuss with regulators the clinical and regulatory requirements in connection with potential inclusion of arthroscopic delivery in MACI’s approved labeling. We also are evaluating the feasibility and potential market opportunity involved in delivering MACI treatment to patients suffering from cartilage damage in the ankle. We believe that this potential lifecycle enhancement and indication expansion for MACI will require the conduct of an additional randomized clinical trial concerning the product’s use for this indication and we intend to discuss this with FDA in due course.

Epicel

Epicel (cultured epidermal autografts) is a permanent skin replacement for deep-dermal or full-thickness burns greater than or equal to 30% of TBSA. The extent of the skin surface that the burn affects is usually referred to as a percent of TBSA. Epicel is currently the only FDA approved cultured epidermal autograft product available for large total surface area burns in both adult and pediatric patients.

Epicel is produced by isolating and expanding keratinocytes, which are the predominant cell type in the epidermis or outer layer of the skin, and which are originally obtained by taking of a small biopsy of a patient’s healthy skin. Epicel is an important treatment option for patients with severe burns because these patients are generally understood to need a keratinocyte-based epithelium, and because of the severity and extent of their burns, these patients generally have very little healthy skin remaining on their bodies from which to obtain keratinocyte-based epithelium for autografting.

Epicel is a cell-based product that is regulated by the Center for Biologics Evaluation and Research ("CBER") under medical device authorities. Epicel was designated as a HUD in 1998 and a Humanitarian Device Exemption ("HDE") application for the product was submitted in 1999. HUDs are devices that are intended for diseases or conditions that affect not more than 8,000 individuals annually in the U.S. Under an HDE approval, a HUD cannot be sold for an amount that exceeds the cost of research and development, fabrication and distribution unless certain conditions are met. A HUD is eligible to be sold for profit after receiving HDE approval if the device meets certain eligibility criteria, including where the device is intended for the treatment of a disease or condition that occurs in pediatric patients and such device is labeled for use in pediatric patients.

On February 18, 2016, the FDA approved our HDE supplement to revise the labeled indications of use for Epicel to specifically include pediatric patients. The revised product label now specifies that the probable benefit of Epicel, mainly related to survival, was demonstrated in two Epicel clinical experience databases and a physician-sponsored study comparing outcomes in patients with massive burns treated with Epicel, relative to standard care. Because of the change in the label to specifically include use in pediatric patients, Epicel is no longer subject to the HDE profit restrictions. In conjunction with adding the pediatric labeling and meeting pediatric eligibility criteria, the FDA has determined the Annual Distribution Number, or ADN, for Epicel to be 360,400 which is approximately 30 times larger than the volume of grafts sold in 2021. Currently, over 100 patients are treated with Epicel in the U.S. each year.

Market Opportunity for Epicel

Each year in the U.S., more than 40,000 people are hospitalized for burns. Approximately 1,500 of these patients are treated for burns covering more than 30% of their TBSA, the labeled indication for Epicel. Currently, the mortality rate for this group is approximately 34%, partially due to the inability to quickly close wounds because of the lack of remaining healthy tissue from which to harvest autografts. Although age can vary, the typical Epicel patient is young and has suffered full-thickness burns due to a wide variety of occupational, household or auto accidents. Many of the most severely burned patients are medivac transported to one of the approximately 140 specialized burn centers across the U.S. While the average acute care hospital has less than 3 admissions for burns annually, these specialized burn centers average over 200 admissions per year.

Relative to clinical need, we believe Epicel has been underutilized by burn centers due to the lack of a consistent promotional effort prior to 2015. Since the acquisition of Epicel we have expanded our sales force from a single representative to thirteen sales and clinical personnel. We expect Epicel's utility to continue to grow as commercial and medical efforts are appropriately dedicated to the product and the burn centers that use it to treat patients.

Due to the low incidence and sporadic nature of severe burns, Epicel revenue has inherent variability from quarter to quarter and does not exhibit significant seasonality. Over the past four years, a single quarter has ranged from as high as 37% to as low as 17% of annual volumes. Seasonal sales patterns and other variations related to our revenue recognition may cause significant fluctuations in our results of operations and cash flows.

NexoBrid

Our development portfolio also includes NexoBrid, a registration-stage, topically-administered biological product that enzymatically removes nonviable burn tissue, or eschar, in patients with deep partial and full-thickness thermal burns. We have entered into exclusive license and supply agreements with MediWound to commercialize NexoBrid and any improvements to the product in North America. On September 16, 2020, we announced the acceptance of MediWound's submission of a BLA for review by the FDA to seek marketing approval for NexoBrid in the U.S. for the treatment of severe burns, and the FDA's assignment of a PDUFA target date for the product of June 29, 2021. Subsequently, on June 29, 2021, we announced that MediWound had received a complete response letter from the FDA regarding the BLA, through which the FDA communicated to MediWound that it had completed its review of the BLA, as amended, and had determined that it could not approve the BLA in its present form. We continue to work with MediWound, BARDA and the FDA to address the issues identified in the agency's complete response letter, to prepare and submit a BLA re-submission to the FDA and to seek the potential approval of NexoBrid.

NexoBrid is approved in the EU and other international markets and has been designated as an orphan biologic in the U.S., EU and other international markets. Pursuant to the terms of our existing license agreement, if the BLA is approved, MediWound will transfer the BLA to us and we will market NexoBrid in the U.S. Both MediWound and Vericel, under the supervision of a Central Steering Committee comprised of members of both companies, will continue to guide the development of NexoBrid in North America. Under our license agreement with MediWound, NexoBrid is being manufactured for BARDA prior to approval by the FDA under an emergency use authorization.

Production

Cell Manufacturing and Cell Production Components

Our cell-manufacturing facility is located in Cambridge, Massachusetts, and is used for the U.S. manufacturing and distribution of MACI and Epicel. The Cambridge facility also houses our research and development function, which is responsible for process development, release assay development, and technology transfers between sites and departments.

Research & Development

The bulk of our ongoing research and development activities are focused on exploring methods that improve our ability to efficiently manufacture high quality cell therapy products for patients. We have performed an in-depth analysis of the cell culture processes used in the manufacturing of Epicel and MACI and have identified several areas for potential improvement. Therefore, our research and development program is focused on the many facets of process development for all of our products including, but not limited to, tissue procurement and processing, cell culture surface and media modification, and other process efficiencies.

Patents and Proprietary Rights

Our success depends in part on our ability, and the ability of our future licensors, to obtain patent protection for our products and processes.

As part of the acquisition of the Cell Therapy and Regenerative Medicine (“CTRM”) business from Sanofi, we acquired a multinational intellectual property estate, which includes patents and patent applications directed to chondrocyte implants and technologies related to the determination of the presence of chondrocytes in the cell cultures used to produce the chondrocyte implants. Although we do not own any patents or patent applications relating to Epicel, many of the processes and techniques are trade secrets, and would be difficult to replicate without significant investment and time. We own issued patents directed to methods of determining the presence of chondrocytes in cell cultures used to produce both MACI and Carticel, which are scheduled to expire October 2029 in the U.S. and in April 2028 abroad. We have one issued patent in the U.S. directed to a device related to MACI that is set to expire in November 2033, and one issued patent in the EU set to expire in November 2034.

As a biologic, MACI is entitled to twelve years of data exclusivity until December 13, 2028, calculated from its date of approval. When these patents and data exclusivity expire, our opportunity to establish or maintain product revenue could be substantially reduced. In the future, we may also rely on certain licenses granted by third parties for certain patent rights, including for future product candidates, such as the license from MediWound for North American commercial rights to NexoBrid. We will need to comply with the terms of such agreements in order to maintain our rights to such patents.

Our efforts to secure our proprietary rights also include our reliance on trade secrets and know-how, which we seek to protect, in part, by confidentiality agreements. It is our policy to require our employees, consultants, contractors, manufacturers, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information developed or made known to the individual during the course of the individual’s relationship with us is to be kept confidential and not disclosed to third parties except in specific limited circumstances. We also require signed confidentiality or material transfer agreements from any company that is to receive our confidential information. In the case of employees, consultants and contractors, the agreements generally provide that all inventions conceived by the individual while rendering services to us shall be assigned to us as the exclusive property of Vericel.

See “Government Regulation - Product Approval” and “Risk Factors - Risks Related to Intellectual Property,” below, for additional information.

We also own a broadly filed trademark portfolio with registrations for MACI and Epicel.

Sales and Marketing

Both our marketed and development stage products are specialty products with focused physician and institutional call points. The MACI sales organization is comprised of approximately 76 Clinical Account Specialists in nine geographical regions. Those Clinical Account Specialists are managed by nine area sales directors and ultimately overseen by a National

Sales Director. The current target audience is a concentrated (approximately 5,000) set of sports medicine and general orthopedic surgeons and their staffs.

Most private payers have a medical policy that covers treatment with MACI with the top 30 largest commercial payers having a formal medical policy for MACI or ACI in general. Even for private payers that have not yet approved a medical policy for MACI, for medically appropriate cases, we often obtain approval on a case-by-case basis.

We contract with two specialty pharmacies, Orsini Pharmaceutical Services, Inc. ("Orsini") and AllCare Plus Pharmacy, Inc. ("AllCare") to distribute MACI in a manner in which we retain the credit and collection risk from the end customer. Pursuant to these agreements, both Orsini and AllCare act as non-exclusive specialty pharmacy providers of MACI, and we pay both specialty pharmacies a fee for each patient to whom MACI is dispensed. In addition, we sell MACI directly to DMS Pharmaceutical ("DMS") for military patients treated at military treatment facilities, or direct to facilities based on contracted rates.

The field force supporting our burn care franchise is currently comprised of seven account managers and six burn clinical specialists who are led by a regional and a national sales director. There are approximately 140 specialized burn centers in the U.S., and a subset of these institutions regularly treat patients suffering from large TBSA burns. As a result, reaching target centers is feasible with a relatively small sales team. The burn sales team for Epicel has been increased to support the anticipated NexoBrid launch, following potential BLA approval by the FDA.

Government Regulation

Our research and development activities and the manufacturing and marketing of our products are subject to the laws and regulations of governmental authorities in the U.S. and other countries in which our products may be marketed. Specifically, in the U.S., the FDA regulates drugs, biologics and medical devices and requires new product approvals or clearances to assure safety and effectiveness of these products. Governments in other countries have similar requirements for testing and marketing. In the U.S., in addition to meeting FDA regulations, we are also subject to other federal laws, such as the Occupational Safety and Health Act and the Environmental Protection Act, as well as certain state laws.

Some human cell or tissue products that are intended for implantation, transplantation, infusion, or transfer into a human recipient are regulated solely as human cell, tissue, and cellular and tissue-based products ("HCT/Ps") and do not require the FDA's premarket review. If these cell or tissue products do not meet the FDA's requirements for regulation solely as an HCT/P, they require FDA premarket review and marketing authorization. The types of marketing authorizations required for non HCT/P cell therapy products have evolved since cell therapy products were initially introduced. Epicel was approved by the Center for Devices and Radiological Health, as an HDE medical device in 2007, but now is regulated by CBER under the same medical device regulations. MACI, approved in 2016, is regulated by CBER as a combination cell therapy/device product and required an approved BLA to be marketed in the U.S. NexoBrid, a product licensed in North America from MediWound, is currently in clinical development in North America. In the U.S., NexoBrid is regulated as a botanical protein biologic and requires an approved BLA to be marketed in the U.S. Commercial production of these products needs to occur in FDA-registered facilities in compliance with cGMP requirements for biologics.

Regulatory Process

The FDA regulates biologics under the Federal Food, Drug, and Cosmetic Act ("FFDCA") and the Public Health Service Act, and their implementing regulations. Obtaining approval of a BLA for a new biological product is a lengthy process, leading from the development of a new product through preclinical and clinical testing. This process takes several years and requires expenditure of significant resources. There can be no assurance that our current or future product candidates will ultimately receive approval.

The FFDCA and other federal and state statutes and regulations govern the research, testing, manufacture, safety, labeling, storage, record-keeping, approval, distribution, use, adverse event reporting, advertising and promotion of our products. Noncompliance with applicable requirements can result in civil penalties, recalls, injunctions or seizures of products, refusal of the government to approve our product approval applications or to allow us to enter into government supply contracts, withdrawal of previously approved applications and criminal prosecution.

Product Approval

In order to obtain an FDA license for, or approval of, a new biological product, sponsors must submit proof of safety, purity and potency, or effectiveness. In most cases, such proof entails extensive nonclinical, also known as preclinical, studies in animal models and well-controlled clinical trials in human subjects. The testing, preparation of necessary applications and processing of those applications by the FDA is expensive, can take several years to complete and could have uncertain outcomes. The FDA regulatory review and approval process is complex and can result in requests for additional data, increased development costs, time to market delays, or preclude us from bringing to market new products. The FDA may also require post-marketing studies and risk evaluation and mitigation strategies ("REMS") as conditions to approval. These requirements will add to the cost of regulatory compliance and the cost to sell our products, due to complex distribution and restricted commercial operations. Product approvals may be withdrawn if compliance with applicable regulations is not maintained or if safety issues are identified during routine safety monitoring following commercialization.

Adequate and well-controlled clinical studies are required by the FDA for approval of a BLA. To conduct a clinical trial in the U.S., the study sponsor is required to submit an Investigational New Drug ("IND") application, including the study protocol, prior to commencing human clinical trials. The submission must be supported by data, typically including the results of nonclinical, manufacturing and laboratory testing. The conduct of the nonclinical tests must comply with Good Laboratory Practice, and applicable cGMP requirements. Long-term nonclinical testing, such as animal reproductive toxicity and carcinogenicity, is conducted if warranted, and its results are submitted in connection with the IND to support a future BLA. Following the initial submission of the IND, the FDA has 30 days to review the application and raise safety and other clinical trial issues. If questions or objections are not raised within that period, the clinical trial may commence according to the investigational protocol submitted to the FDA and following Institutional Review Board ("IRB") approvals for each of the clinical sites where the study will be conducted. Protocol amendments need to be submitted and approved by the FDA prior to implementation. We have submitted an IND for MACI, and we conducted clinical investigations under that IND. Clinical studies can also be conducted outside of the U.S. with or without a U.S. IND. However, a clinical trial application ("CTA") or IND is required to be submitted to the local competent regulatory authority to begin conducting human clinical trials. The CTA has similar data requirements to those of an IND.

MACI and NexoBrid are regulated by the FDA as biologics. For products that are regulated as biologics, the FDA requires: (i) nonclinical animal testing to establish a safety profile and/or a starting dose for initiation of clinical trials in humans; (ii) submission to the FDA of an IND application, which must become effective prior to the initiation of human clinical trials; (iii) adequate and well-controlled clinical trials to demonstrate the safety, purity and potency, or effectiveness of the product for its intended use; (iv) submission to the FDA of a BLA; and (v) review and approval of the BLA as well as pre-approval inspections of the manufacturing facility by the FDA.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may sometimes overlap:

- Phase 1—The biological product is initially tested for safety and tolerability. In the case of biological products and those for severe or life-threatening diseases, the initial human testing is generally conducted in healthy patients. These trials may also provide early evidence of effectiveness.

- Phase 2—These trials are conducted in a limited number of subjects in the target population to determine a safe and effective dosage to evaluate in Phase 3 and to identify possibly related adverse effects and safety risks. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.

- Phase 3—Phase 3 trials are undertaken to provide evidence of clinical efficacy and to further evaluate dosage, potency, and safety in an expanded patient population at multiple clinical trial sites. Phase 3 studies are performed after preliminary evidence suggesting effectiveness of the product has been obtained, and are intended to establish the overall benefit-risk relationship of the investigational product, and to provide an adequate basis for product approval and labeling.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These trials may be required by the FDA as a condition of approval and are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up. The FDA has express statutory authority to require post-market clinical trials to address safety issues. All of these trials must be conducted in

accordance with good clinical practice ("GCP") requirements in order protect the health and safety of human subjects and for the data to be considered reliable for regulatory purposes.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Annual progress reports detailing the results of the clinical trials must be submitted to the IND. Written IND safety reports must be promptly submitted to the FDA and the investigators for serious and unexpected adverse events; any findings from other studies, tests in laboratory animals or in vitro testing that suggest a significant risk for human subjects; or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within seven calendar days after the sponsor's initial receipt of the information.

Phase 1, Phase 2, and Phase 3 clinical trials may not be completed successfully or within any specified period, or at all. Regulatory authorities, a data safety monitoring board or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the participants are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological product has been associated with unexpected serious harm to patients.

A drug being studied in clinical trials may be made available to individual patients in certain circumstances. Pursuant to the 21st Century Cures Act, or Cures Act, which was signed into law in December 2016, the manufacturer of an investigational drug for a serious disease or condition is required to make available, such as by posting on its website, its policy on evaluating and responding to requests for individual patient access to such investigational drug. This requirement applies on the later of 60 calendar days after the date of enactment of the Cures Act or the first initiation of a Phase 2 or Phase 3 trial of the investigational drug.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the physical characteristics of the biological product as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. To help reduce the risk of the introduction of adventitious agents with the use of biological products, the Public Health Service Act emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the sponsor must develop methods for testing the identity, strength, quality, potency, and purity of the final biological product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the biological product candidate does not undergo unacceptable deterioration over its shelf life.

After completion of the required clinical testing, a BLA is prepared and submitted to the FDA. FDA review and approval of the BLA is required before marketing of the product may begin in the U.S. The BLA must include the results of all nonclinical, clinical, and other testing and a compilation of data relating to the quality and manufacture of the product, including, chemistry, manufacture, and controls, to demonstrate the safety, purity and potency, or efficacy, of the product based on these results. The cost of preparing and submitting a BLA is substantial. Under federal law, the submission of most BLAs is subject to an application user fee, as well as an annual prescription drug product program user fee, which may total several million dollars and are increased annually.

The FDA has 60 days from its receipt of a BLA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of BLAs, including to review 90 percent of standard BLAs within 10 months from the date the application is accepted for filing. Although the FDA often meets its user fee performance goals, the FDA can extend these timelines as warranted. The FDA usually refers applications for novel biologics, or biologics which present difficult questions of safety or efficacy, to an advisory committee-typically a panel that includes clinicians and other experts-for review, evaluation, and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving a BLA, the FDA will typically inspect one, or more, clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the biologic is manufactured as part of a pre-approval inspection. The FDA will not approve the product unless it verifies that compliance with requirements for cGMP is satisfactory and the BLA contains data that provide substantial evidence that the biologic is safe, pure and potent, or effective, for the intended use.

For certain products, the FDA also will not approve the product if the manufacturer is not in compliance with the Good Tissue Practices ("GTP"). These are FDA regulations that govern the methods used in, and the facilities and controls used for, the manufacture of HCT/Ps, which are human cells or tissue intended for implantation, transplant, infusion, or transfer into a human recipient. The primary intent of the GTP requirements is to ensure that cell and tissue based products are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require tissue establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing. To assure cGMP, GTP and GCP compliance, an applicant must expend significant time, money and effort in the areas of training, record keeping, production, and quality control.

After the FDA evaluates the BLA and the manufacturing facilities, it issues either an approval letter or a complete response letter. A complete response letter means that the BLA will not be approved in its present form and generally outlines the deficiencies in the submission. Complete responses may require substantial additional testing, or information, in order for the FDA to reconsider the application. If and when those deficiencies have been addressed to the FDA's satisfaction, the FDA will issue an approval letter. The agency will review such resubmissions in two or six months depending on the type of information included. The FDA's approval is never guaranteed, and the FDA may refuse to approve a BLA if the regulatory requirements are not satisfied.

An approval letter authorizes commercial marketing of the biologic with specific prescribing information for specific indications. The approval for a biologic may be significantly more limited than requested in the application, including limitations on the specific diseases and dosages or the indications for use, which could restrict the commercial value of the product. The FDA may also require that certain contraindications, warnings, or precautions be included in the product labeling. In addition, as a condition of BLA approval, the FDA may require a REMS to help ensure that the benefits of the biologic outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals, and elements to assure safe use ("ETASU"). ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring, and the use of patient registries. The requirement for a REMS or use of a companion diagnostic with a biologic can materially affect the potential market and profitability of the biologic. Moreover, product approval may require, as a condition of approval, substantial post-approval testing and surveillance to monitor the biologic's safety or efficacy. Once granted, product approvals may be withdrawn if compliance with regulatory requirements and standards is not maintained or problems are identified following initial marketing.

Under current requirements, facilities manufacturing biological products for commercial distribution must be registered with the FDA. In addition to the preclinical studies and clinical trials, the BLA includes a description of the facilities, equipment and personnel involved in the manufacturing process. A biologics license, which is the product's approval, is granted on the basis of inspections of the applicant's facilities in which the primary focus is on compliance with cGMP and the ability to consistently manufacture the product in the facility in accordance with the BLA. If the FDA finds the results of the inspection unsatisfactory, it may decline to approve the BLA, resulting in a delay in production and commercialization of products.

Regulation of Combination Products in the U.S.

Certain products may be comprised of components that would normally be regulated under different types of regulatory authorities and frequently by different centers at the FDA. These products are known as combination products. Specifically, under regulations issued by the FDA, a combination product may be:

- A product comprised of two or more regulated components that are physically, chemically, or otherwise combined or mixed and produced as a single entity;

- Two or more separate products packaged together in a single package or as a unit and comprised of drug and device products, device and biological products, or biological and drug products;

- A drug, or device, or biological product packaged separately that according to its investigational plan or proposed labeling is intended for use only with an approved individually specified drug, or device, or biological product where both are required to achieve the intended use, indication, or effect and where upon approval of the proposed product the labeling of the approved product would need to be changed, e.g., to reflect a change in intended use, dosage form, strength, route of administration, or significant change in dose; or

- Any investigational drug, device, or biological product packaged separately that according to its proposed labeling is for use only with another individually specified investigational drug, device, or biological product where both are required to achieve the intended use, indication, or effect.

Under the FFDCA, the FDA is charged with assigning a center with primary jurisdiction, or a lead center, for review of a combination product. That determination is based on the "primary mode of action" of the combination product. Thus, if the primary mode of action of a device-biologic combination product is attributable to the biologic product, the FDA center responsible for premarket review of the biologic product would have primary jurisdiction for the combination product. The FDA has also established an Office of Combination Products to address issues surrounding combination products and provide more certainty to the regulatory review process. That office serves as a focal point for combination product issues for agency reviewers and industry. It is also responsible for developing guidance and regulations to clarify the regulation of combination products, and for assignment of the FDA center that has primary jurisdiction for review of combination products where the jurisdiction is unclear or in dispute.

Accelerated Approval for Regenerative Advanced Therapies

As part of the Cures Act, Congress amended the FFDCA to create an accelerated approval pathway for regenerative advanced therapies, which include cell therapies, therapeutic tissue engineering products, human cell and tissue products, and combination products using any such therapies or products. Regenerative advanced therapies do not include those human cells, tissues, and cellular and tissue-based products regulated solely under section 361 of the Public Health Service Act and 21 CFR Part 1271. The new program is intended to facilitate efficient development and expedite review of regenerative advanced therapies, which are intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition. A sponsor may request that the FDA designate a drug as a regenerative advanced therapy concurrently with or at any time after submission of an IND. The FDA has 60 calendar days to determine whether the drug meets the criteria, including whether there is preliminary clinical evidence indicating that the drug has the potential to address unmet medical needs for a serious or life-threatening disease or condition. A new drug application or BLA for a regenerative advanced therapy may be eligible for priority review or accelerated approval through surrogate or intermediate endpoints reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of sites. Therapies with a Regenerative Medicine Advanced Therapy ("RMAT") designation will be eligible for accelerated approval through, as appropriate:

(i) Surrogate or intermediate endpoints reasonably likely to predict long-term clinical benefit; or

(ii) Reliance upon data obtained from a meaningful number of sites, including through expansion to additional sites, as appropriate.

Another benefit of RMAT designation is that it creates the option to meet post-approval requirements beyond the standard, controlled clinical trial. Post-approval requirements can be met through:

- Clinical evidence, clinical studies, patient registries, or other sources of real-world evidence, such as electronic health records;
- The collection of larger confirmatory data sets; or
- Post-approval monitoring of all patients treated with such therapy prior to approval of the therapy.

Finally, the designation also includes early interactions with the FDA to discuss any potential surrogate or intermediate endpoint to be used to support accelerated approval.

Humanitarian Device Exemption

Unless an exemption applies, each medical device commercially distributed in the U.S. requires either a substantial equivalence determination under a premarket notification submission pursuant to Section 510(k) of the FFDCA, or an approval of a premarket approval application ("PMA"). The FDA provides an incentive for the development of certain devices intended to benefit patients by treating or diagnosing a disease or condition that affects or is manifested in not more than 8,000 individuals in the U.S. per year. These devices receive a HUD designation and may be eligible for marketing approval under an HDE application. An HDE application is a premarket approval application that seeks an exemption from the effectiveness requirement that would otherwise apply to the application. FDA approval of an HDE application authorizes the applicant to market the device.

To obtain approval for a HUD, an HDE application is submitted to the FDA. An HDE application is similar in both form and content to a PMA application in that the applicant must demonstrate a reasonable assurance of safety, but in an HDE application, the applicant seeks an exemption from the PMA requirement of demonstrating a reasonable assurance of effectiveness. An HDE application is not required to contain the results of scientifically valid clinical investigations

demonstrating that the device is effective for its intended purpose. The application, however, must contain sufficient information for the FDA to determine that the device does not pose an unreasonable or significant risk of illness or injury, and that the probable benefit to health outweighs the risk of injury or illness from its use, taking into account the probable risks and benefits of currently available devices or alternative forms of treatment. Additionally, the applicant must demonstrate that no comparable devices are available to treat or diagnose the disease or condition, and that they could not otherwise bring the device to market.

Except in certain circumstances, HUDs approved under an HDE cannot be sold for an amount that exceeds the costs of research and development, fabrication, and distribution of the device (i.e., for profit). Under the current HDE provision, as amended by the Food and Drug Administration Safety and Innovation Act (the "FDASIA"), a device is eligible to be sold for profit after receiving HDE approval if the device is intended for the treatment or diagnosis of a disease or condition that occurs in pediatric patients or in a pediatric subpopulation, and such device is labeled for use in pediatric patients or in a pediatric subpopulation in which the disease or condition occurs; or is intended for the treatment or diagnosis of a disease or condition that does not occur in pediatric patients or that occurs in pediatric patients in such numbers that the development of the device for such patients is impossible, highly impracticable, or unsafe. If the FDA makes a determination that a HUD meets the eligibility criteria, the HUD is permitted to be sold for profit after receiving HDE approval as long as the number of devices distributed in any calendar year does not exceed the ADN for the device. The holder of the HDE must immediately notify the FDA if the number of devices distributed during a calendar year exceeds the ADN. The ADN is determined by the FDA when the agency approves the original HDE application; or when the agency approves an HDE supplement for an HDE approved before the enactment of FDASIA if the HDE holder seeks a determination for the HUD in an HDE supplement based upon the profit-making eligibility criteria, and the FDA determines that the HUD meets the eligibility criteria.

FDA Post-Approval Requirements

Maintaining substantial compliance with applicable federal, state, local, and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Rigorous and extensive FDA regulation of biological products and devices continues after approval, particularly with respect to cGMP. We will rely, and expect to continue to rely, on third parties to manufacture or supply certain components, equipment, disposable devices, testing and other materials used in our manufacturing process for any products that we commercialize or may commercialize. Manufacturers of our products are required to comply with applicable requirements in the cGMP regulations, including quality control and quality assurance and maintenance of records and documentation. We cannot be certain that we or our present or future suppliers will be able to comply with the cGMP and other FDA regulatory requirements. Other post-approval requirements applicable to biological products include reporting of cGMP deviations that may affect the identity, potency, purity and overall safety of a distributed product, record-keeping requirements, monitoring and reporting of adverse effects, reporting updated safety and efficacy information, periodic reporting requirements and complying with electronic record and signature requirements. Similarly, there are a number of post-marketing requirements for devices, including medical device reporting regulations that require manufacturers to report to the FDA if a device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur; and corrections and removal reporting regulations that require manufacturers to 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 FFDCA that may present a risk to health. Additionally, devices must comply with the cGMP requirements that are set forth in the FDA's Quality System Regulation (QSR), including complaint handling and corrective and preventative actions.

After a BLA is approved, the biological product also may be subject to official lot release. As part of the manufacturing process, the manufacturer is required to perform certain tests on each lot of the product before it is released for distribution. If the product is subject to official release by the FDA, the manufacturer submits samples of each lot of product to the FDA together with a release protocol showing a summary of the history of manufacture of the lot and the results of all of the manufacturer's tests performed on the lot. The FDA also may perform certain confirmatory tests on lots of some products, such as viral vaccines, before releasing the lots for distribution by the manufacturer. In addition, the FDA conducts laboratory research related to the regulatory standards on the safety, purity, potency, and effectiveness of biological products. After approval of biologics, manufacturers must address any safety issues that arise, are subject to recalls or a halt in manufacturing, and are subject to periodic inspection after approval.

Discovery of previously unknown problems or the failure to comply with the applicable regulatory requirements, by us or our suppliers, may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions and adverse publicity. FDA sanctions could include refusal to approve pending applications, license revocation, withdrawal of an approval, clinical hold, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, mandated corrective

advertising or communications with doctors, debarment, restitution, disgorgement of profits, or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

Biological product and medical device manufacturers and other entities involved in the manufacture and distribution of approved biological products and devices are required to register their facilities with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP and other laws. In addition, changes to the manufacturing process or facility generally require prior FDA approval before being implemented and other types of changes to the approved product, such as adding new indications and additional labeling claims, are also subject to further FDA review and approval, with certain exceptions.

Pediatric Research Equity Act

Under the Pediatric Research Equity Act ("PREA"), a BLA or BLA supplement claiming a new indication must contain data to assess the safety and effectiveness of the biological product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective, for a new product, new indication or dosage form. The intent of PREA is to compel sponsors whose products have pediatric applicability to study those products in pediatric populations, rather than ignoring pediatric indications for adult indications that could be more economically desirable. The FDA may grant deferrals for submission of data or full or partial waivers. By its terms, PREA does not apply to any biological product for an indication for which orphan designation has been granted, unless the FDA issues regulations saying otherwise. Because the FDA has not issued any such regulations, submission of a pediatric assessment is not required for an application to market a product for an orphan-designated indication, and waivers are not needed at this time. However, if only one indication for a product has orphan designation, a pediatric assessment may still be required for any applications to market that same product for the non-orphan indication(s).

U.S. Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration, and specifics of the FDA approval of the use of our current or future product candidates, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. Patent term restoration can compensate for time lost during product development and the regulatory review process by returning up to five years of patent life for a patent that covers a new product or its use. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The period of patent term restoration is generally one-half the time between the effective date of an IND (falling after issuance of the patent) and the submission date of a BLA, plus the time between the submission date of the BLA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved biological product is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The application for patent term extension is subject to approval by the U.S. Patent and Trademark Office, or PTO, in consultation with the FDA.

A biological product can obtain pediatric market exclusivity in the U.S. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study.

Biosimilars

The Patient Protection and Affordable Care Act, or the Affordable Care Act, includes the Biologics Price Competition and Innovation Act of 2009. That Act created an approval pathway authorizing the FDA to approve biosimilars and interchangeable biosimilars. Biosimilars are biological products which are "highly similar" to a previously approved biologic product or "reference product" and for which there are no clinically meaningful differences between the biosimilar product and the reference product in terms of the safety, purity, and potency as shown through analytical studies, animal studies and a clinical study or studies. For the FDA to approve a biosimilar product as interchangeable with a reference product, the agency must find that the biosimilar product can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biosimilar and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. A reference biologic is granted 12 years of exclusivity from the time of first licensure of the reference product.

Advertising and Promotion

The FDA closely regulates the post-approval marketing and promotion of biologics and devices including regulating through standards and regulations for direct-to-consumer advertising and promotional activities involving the internet. The agency also prohibits the off-label promotion of biologics and devices, and provides guidance on industry-sponsored scientific and educational activities to ensure that these activities are not promotional. Any claims we make for our products in advertising or promotion must be appropriately balanced with important safety information and otherwise adequately substantiated. Failure to comply with these requirements can result in adverse publicity and significant penalties, including the issuance of untitled or warning letters directing a company to correct deviations from FDA standards, corrective advertising, a requirement that future advertising and promotional materials be pre-cleared by the FDA, injunctions, and federal and state civil and criminal investigations and prosecutions.

While doctors are free to prescribe any product approved by the FDA for use, a company can only make claims relating to safety and effectiveness of a biological product or device that are consistent with the FDA approval or clearance, and the company is allowed to actively market and promote a biological product or device only for the particular use and treatment approved or cleared by the FDA. For BLAs, changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new BLA or BLA supplement before the change can be implemented. A BLA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing BLA supplements as it does in reviewing BLAs. Similarly, changes to approved or cleared devices may require FDA's premarket review.

Orphan Drug

Under the Orphan Drug Act, the FDA may grant orphan designation to drugs or biologics intended to treat a rare disease or condition, generally a disease or condition that affects fewer than 200,000 individuals in the U.S., or affects more than 200,000 individuals in the U.S. and for which there is no reasonable expectation that the cost of developing and making available the drug or biologic in the U.S. for such disease or condition will be recovered from sales in the U.S. of such drug or biologic. Orphan drug designation must be requested to and granted by the FDA before submitting a BLA. Among the other benefits of orphan drug designation are opportunities for grant funding towards clinical trial costs, tax credits for certain research and a waiver of the BLA application user fee. After the FDA grants orphan drug designation, the generic identity of the biologic and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not necessarily convey any advantage in, or shorten the duration of, the regulatory review and approval process. The first BLA applicant to receive FDA approval for a particular product to treat a particular disease with FDA orphan drug designation is entitled to a seven-year exclusive marketing period in the U.S. for that product, for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market the same drug for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan product to meet the needs of patients with the disease or condition for which the biologic was designated. Orphan drug exclusivity, which would most likely run concurrently with the exclusivity, if any, received from the time of first licensure of a reference product, does not prevent the FDA from approving a different biologic for the same disease or condition, or the same biologic for a different disease or condition.

Other Healthcare Laws

In the U.S., the research, manufacturing, distribution, sale and promotion of biological products and devices are subject to regulation by various federal, state and local authorities in addition to the FDA, including the Centers for Medicare & Medicaid Services, other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice, state Attorneys General, and other federal, state and local government agencies. For example, sales, marketing and scientific/educational grant programs must comply with the FFDCA, Anti-Kickback Statute, as amended, the False Claims Act, as amended, the privacy regulations promulgated under the Health Insurance Portability and Accountability Act, or HIPAA, and similar state laws. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. All of these activities are also potentially subject to federal and state consumer protection and unfair competition laws.

As noted above, in the U.S., we are subject to complex laws and regulations pertaining to healthcare "fraud and abuse," including, but not limited to, the federal Anti-Kickback Statute, the federal False Claims Act, and other state and federal laws

and regulations. The Anti-Kickback Statute makes it illegal for any person, including a biological product manufacturer (or a party acting on its behalf) to knowingly and willfully solicit, receive, offer, or pay any remuneration that is intended to induce the referral of business, including the purchase or order of an item for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. Violations of this law are punishable by up to five years in prison, criminal fines, administrative civil money penalties, and exclusion from participation in federal healthcare programs. In addition, many states have adopted laws similar to the Anti-Kickback Statute. Some of these state prohibitions apply to the referral of patients for healthcare services reimbursed by any insurer, not just federal healthcare programs such as Medicare and Medicaid. Due to the breadth of these federal and state anti-kickback laws and the potential for additional legal or regulatory change in this area, it is possible that our sales and marketing practices and/or our relationships with physicians might be challenged under anti-kickback laws, which could harm us. Because we commercialize products that could be reimbursed under a federal healthcare program and other governmental healthcare programs, we have developed and maintained a comprehensive compliance program that establishes internal controls to facilitate adherence to the rules and program requirements to which we are subject.

The federal False Claims Act prohibits anyone from, among other things, knowingly presenting, or causing to be presented, for payment to federal programs (including Medicare and Medicaid) claims for items or services, including biological products, that are false or fraudulent. Although we would not submit claims directly to payers, manufacturers can be held liable under these laws if they are deemed to "cause" the submission of false or fraudulent claims by, for example, providing inaccurate billing or coding information to customers or promoting a product off-label. In addition, our activities relating to the reporting of wholesaler or estimated retail prices for our products, the reporting of prices used to calculate Medicaid rebate information and other information affecting federal, state, and third-party reimbursement for our products, and the sale and marketing of our products, are subject to scrutiny under this law. For example, pharmaceutical companies have been prosecuted under the federal False Claims Act in connection with their off-label promotion of drugs. Penalties for a False Claims Act violation include three times the actual damages sustained by the government, plus mandatory civil penalties of between $11,803 and $23,607 for each separate false claim, the potential for exclusion from participation in federal healthcare programs, and, although the federal False Claims Act is a civil statute, conduct that results in a False Claims Act violation may also implicate various federal criminal statutes. If the government were to allege that we were, or convict us of, violating these false claims laws, we could be subject to a substantial fine and may suffer a decline in our stock price. In addition, private individuals have the ability to bring actions under the federal False Claims Act and certain states have enacted laws modeled after the federal False Claims Act.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes that prohibit a person from knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false, fictitious, or fraudulent statements or representations in connection with the delivery of, or payment for, healthcare benefits, items or services 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.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH and their respective implementing regulations, including the Final Omnibus Rule published in January 2013, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates, independent contractors or agents of covered entities, that perform services for them that involve the creation, maintenance, receipt, use, or disclosure of, individually identifiable health information relating to the privacy, security and transmission of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, there may be additional federal, state and non-U.S. laws which govern the privacy and security of health and other personal information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

There are also an increasing number of state laws that require manufacturers to make reports to states on pricing and marketing information. Many of these laws contain ambiguities as to what is required to comply with the laws. In addition, a provision of the Patient Protection and Affordable Care Act, referred to as the Sunshine Act, requires biological product manufacturers to track and report to the federal government certain payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals in the previous calendar year. Effective January 1, 2022, these reporting obligations extend to include transfers of value made to certain non-physician providers (physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists and

anesthesiologist assistants, and certified-nurse midwives). These laws may affect our sales, marketing, and other promotional activities by imposing administrative and compliance burdens on us. In addition, given the lack of clarity with respect to these laws and their implementation, our reporting actions could be subject to the penalty provisions of the pertinent state and federal authorities.

International Regulation

In addition to regulations in the U.S., a variety of foreign regulations govern clinical trials, commercial sales, and distribution of product candidates. The marketing authorization approval process and requirements vary from country to country, and the review timelines may be longer or shorter than that required for FDA approval.

EU pharmaceutical legislation requires Marketing Authorization Holders ("MAH") in the EU to comply with the Pediatric Investigational Plan ("PIP") that is in place as a post-authorization commitment agreed with the Pediatric Committee ("PDCO") within the European Medicines Agency ("EMA") to undergo an initial license renewal procedure within five years after initial market authorization. In the case of MACI which has a suspended license due to a European manufacturing facility closure, this would require the registration, qualification and approval of an EU compliant cGMP manufacturing facility before the end of the applicable renewal period in June 2018. However, we did not take such actions prior to expiration, and therefore the EU marketing authorization for MACI expired in June 2018.

Pharmaceutical Coverage and Reimbursement

In the U.S. and other countries, sales of any products for which we receive regulatory approval for commercial sale will depend in part on the availability of reimbursement from third-party payers, including government health administrative authorities, managed care providers, private health insurers, and other organizations. Third-party payers are increasingly examining the medical necessity and cost effectiveness of medical products and services in addition to safety and efficacy and, accordingly, significant uncertainty exists as to the reimbursement status of newly approved therapeutics. Factors that payors consider in determining reimbursement are based on whether the product is (i) a covered benefit under its health plan; (ii) safe, effective and medically necessary; (iii) appropriate for the specific patient; (iv) cost-effective; and (v) neither experimental nor investigational. Third-party reimbursement adequate to enable us to realize an appropriate return on our investment in research and product development may not be available for our products. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage and reimbursement for the product and the level of coverage and reimbursement can differ significantly from payor to payor.

Healthcare Reform

In both the U.S. and certain foreign jurisdictions, there have been, and continue to be, a number of legislative and regulatory changes to the health care system. Among policy makers and payors in the U.S. and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the U.S., the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. In particular, in 2010, the ACA was enacted, which, among other things, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate Program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations, subjected manufacturers to new annual fees and taxes for certain branded prescription drugs, and provided incentives to programs that increase the federal government's comparative effectiveness research.

Since its enactment, there have been numerous judicial, administrative, executive, and legislative efforts to expand, repeal, replace or modify the ACA, some of which have been successful, in part, in modifying the law, as well as court challenges to the constitutionality of the law. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how other healthcare reform measures of the Biden administration or other efforts, if any, to challenge, repeal or replace the ACA will impact our business.

Prior to the Biden administration, on October 13, 2017, former President Trump signed an Executive Order terminating the cost-sharing subsidies that reimburse insurers under the ACA. The former Trump administration concluded that cost-sharing reduction, or CSR, payments to insurance companies required under the ACA have not received necessary appropriations from Congress and announced that it will discontinue these payments immediately until those appropriations are made. Several state Attorneys General filed suit to stop the administration from terminating the subsidies, but their request for a restraining order was denied by a federal judge in California on October 25, 2017. On August 14, 2020, the U.S. Court of Appeals for the Federal Circuit ruled in two separate cases that the federal government is liable for the full amount of unpaid CSRs for the years preceding and including 2017. For CSR claims made by health insurance companies for years 2018 and later, further litigation will be required to determine the amounts due, if any. Further, on June 14, 2018, the U.S. Court of Appeals for the Federal Circuit ruled that the federal government was not required to pay more than $12 billion in ACA risk corridor payments to third-party payors who argued the payments were owed to them. On April 27, 2020, the United States Supreme Court reversed the U.S. Court of Appeals for the Federal Circuit's decision and remanded the case to the U.S. Court of Federal Claims, concluding the government has an obligation to pay these risk corridor payments under the relevant formula. It is unclear what impact these rulings will have on our business.

In addition, other legislative and regulatory changes have been proposed and adopted in the United States since the ACA was enacted:

- On August 2, 2011, the U.S. Budget Control Act of 2011, among other things, included aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through March 31, 2022 due to the COVID-19 pandemic. Following the temporary suspension, a 1% payment reduction will occur beginning April 1, 2022 through June 30, 2022, and the 2% payment reduction will resume on July 1, 2022.
- On January 2, 2013, the U.S. American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers.
- On April 13, 2017, CMS published a final rule that gives states greater flexibility in setting benchmarks for insurers in the individual and small group marketplaces, which may have the effect of relaxing the essential health benefits required under the ACA for plans sold through such marketplaces.
- On May 30, 2018, the Right to Try Act, was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a pharmaceutical manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.
- On May 23, 2019, CMS published a final rule to allow Medicare Advantage Plans the option of using step therapy for Part B drugs beginning January 1, 2020.
- On December 20, 2019, former President Trump signed into law the Further Consolidated Appropriations Act (H.R. 1865), which repealed the Cadillac tax, the health insurance provider tax, and the medical device excise tax. It is impossible to determine whether similar taxes could be instated in the future.

There has been heightened governmental scrutiny in the United States of pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. At a federal level, President Biden signed an Executive Order on July 9, 2021 affirming the administration’s policy to (i) support legislative reforms that would lower the prices of prescription drug and biologics, including by allowing Medicare to negotiate drug prices, by imposing inflation caps, and, by supporting the development and market entry of lower-cost generic drugs and biosimilars; and (ii) support the enactment of a public health insurance option. Among other things, the Executive Order also directs HHS to provide a report on actions to combat excessive pricing of prescription drugs, enhance the domestic drug supply chain, reduce the price that the Federal government pays for drugs, and address price gouging in the industry; and directs the FDA to work with states and Indian Tribes that propose to develop section 804 Importation Programs in accordance with the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, and the FDA’s implementing regulations. FDA released such implementing regulations on September 24, 2020, which went into effect on November 30, 2020, providing guidance for states to build and submit importation plans for drugs from Canada. On September 25, 2020, CMS stated drugs imported by states under this rule will not be eligible for federal rebates under Section 1927 of the Social Security Act and manufacturers would not report these drugs for “best price” or Average Manufacturer Price purposes. Since these drugs are not considered covered outpatient drugs, CMS further stated it will not publish a National Average Drug Acquisition Cost for these drugs. If implemented, importation of drugs from Canada may materially and adversely affect the price we receive for any of our product candidates. Further, on November 20, 2020 CMS issued an Interim Final Rule implementing the Most Favored Nation, or MFN, Model under which Medicare Part B reimbursement rates would have been be calculated for certain drugs and biologicals based on the lowest price

drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. However, on December 29, 2021 CMS rescinded the Most Favored Nations rule. Additionally, on November 30, 2020, HHS published a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to court order, the removal and addition of the aforementioned safe harbors were delayed and recent legislation imposed a moratorium on implementation of the rule until January 1, 2026. Although a number of these and other proposed measures may require authorization through additional legislation to become effective, and the Biden administration may reverse or otherwise change these measures, both the Biden administration and Congress have indicated that they will continue to seek new legislative measures to control drug costs.

There have been several changes to the 340B drug pricing program, which imposes ceilings on prices that drug manufacturers can charge for medications sold to certain health care facilities. On December 27, 2018, the District Court for the District of Columbia invalidated a reimbursement formula change under the 340B drug pricing program, and CMS subsequently altered the FYs 2019 and 2018 reimbursement formula on specified covered outpatient drugs ("SCODs"). The court ruled this change was not an "adjustment" which was within the Secretary's discretion to make but was instead a fundamental change in the reimbursement calculation. However, most recently, on July 31, 2020, the U.S. Court of Appeals for the District of Columbia Circuit overturned the district court's decision and found that the changes were within the Secretary's authority. On September 14, 2020, the plaintiffs-appellees filed a Petition for Rehearing En Banc (i.e., before the full court), but was denied on October 16, 2020. Plaintiffs-appellees filed a petition for a writ of certiorari at the Supreme Court on February 10, 2021. On Friday July 2, 2021, the Supreme Court granted the petition. It is unclear how these developments could affect covered hospitals who might purchase our future products and affect the rates we may charge such facilities for our approved products in the future, if any.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Competitive Environment for Cartilage Repair and Burn Treatment

The biotechnology and medical device industries are characterized by rapidly evolving technology and intense competition. Our competitors include major multinational medical device companies, pharmaceutical companies, biotechnology companies (those that process and distribute human tissue as well as human tissue-derived products or tissue banks), and stem cell companies operating in the fields of tissue engineering, regenerative medicine, orthopedics and neural medicine. Many of these companies are well-established and possess technical, research and development, financial, and sales and marketing resources significantly greater than ours. In addition, many of our smaller potential competitors have formed strategic collaborations, partnerships and other types of joint ventures with larger, well-established industry competitors that afford these companies potential research and development and commercialization advantages in the technology and therapeutic areas currently being pursued by us. Academic institutions, governmental agencies and other public and private research organizations are also conducting and financing research activities which may produce products directly competitive to those being commercialized by us. Moreover, many of these competitors may be able to obtain patent protection, obtain FDA and other regulatory approvals and begin commercial sales of their products before us.

For patients diagnosed with cartilage defects, there are several treatment options, including arthroscopic debridement/chondroplasty, marrow stimulation techniques such as microfracture, osteochondral autografts or allograft derived tissue products for smaller cartilage injuries, osteochondral allografts, and autologous chondrocyte implants (e.g., MACI) for larger injuries.

The main competing treatments for MACI in the U.S. are microfracture and osteochondral allograft. Microfracture, a minimally invasive procedure that can be performed during the initial arthroscopic procedure, involves creating small fractures in the underlying bone allowing bone marrow to enter the defect. This treatment eventually forms a weaker form of cartilage which can offer shorter term relief but is at high risk of breaking down in larger defects. This treatment is sometimes augmented with allograft derived products such as Cartiform® (manufactured and distributed by Osiris (recently acquired by Smith & Nephew) and marketed by Arthrex) and Prochondrix® (marketed by Stryker). Other competitive treatments in the U.S. include a juvenile donor-derived allograft product, DeNovo® NT, marketed by Zimmer Biomet. The osteochondral allograft procedure involves the transplant of a bone and cartilage graft from a deceased donor. The donor tissue is processed by a number of tissue

banks and distributed by several companies. There are multiple other cartilage repair technologies currently being studied in clinical and preclinical studies. Hyalofast® is a biodegradable hyaluronic acid-based scaffold used in conjunction with autologous concentrated bone marrow aspirate being developed by Anika Therapeutics, Inc. It is currently being studied in a Phase 3 trial that was initiated in 2015. Agili-C® is a non-cellular biphasic implant derived from aragonite coral which is implanted into the subchondral bone and is being developed by CartiHeal, Inc. It has undergone a Phase 3 trial that initiated in 2018 and has met its primary endpoint. CartiHeal has announced plans to submit a PMA to the FDA's Center for Devices and Radiological Health ("CDRH") in late 2021 or early 2022 to seek medical device approval for Agili-C.

MACI is the only FDA-approved ACI product on the market in the U.S. We are aware of one other ACI product in development in the U.S. for the treatment of articular cartilage defects of the knee. In 2014, Aesculap Biologics, LLC initiated a Phase 3 trial of NOVOCART® 3D, a biologic-device combination product comprised of autologous chondrocytes seeded on a collagen scaffold. The trial is still enrolling patients.

Patients who are severely burned over a substantial portion of their TBSA have few options for permanent skin coverage. When undamaged skin is available, a procedure known as meshed split-thickness auto-grafting can be considered. However, this option becomes less viable as the percentage of TBSA burn increases. Epicel is a potentially lifesaving therapy and represents the only FDA-approved option for patients with TBSA burns greater than 30%. In September 2018, the FDA-approved Avita Medical's RECELL® System in for use in partial thickness burns and in full-thickness burns in conjunction with meshed split-thickness auto-graft. The RECELL system is a device which enables the on-site preparation of an autologous epithelial cell suspension. One RECELL kit can treat an approximately 10% TBSA wound.

In the general area of cell-based therapies, we potentially compete with a variety of companies, most of whom are specialty medical technology/device or biotechnology companies. Some of these, such as Arthrex and Zimmer, are well-established and have substantial technical and financial resources compared to ours. However, as cell-based products are only just emerging as viable medical therapies, many of our potential competitors are smaller biotechnology and specialty medical products companies.

Environmental Matters

We are subject to various federal, state and local laws and regulations relating to the protection of the environment, human health and safety in the U.S. and in other jurisdictions in which we operate. If we violate these laws and regulations, we could be fined, criminally charged or otherwise sanctioned by regulators. Environmental laws and regulations are complex, change frequently and have become more stringent over time. We believe that our operations currently comply in all material respects with applicable environmental laws and regulations.

Employees and Human Capital Resources

As of December 31, 2021, we employed approximately 281 full-time employees. A significant number of our management and professional employees have had prior experience with pharmaceutical, biotechnology or medical product companies. None of our employees are covered by collective bargaining agreements, and management considers relations with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing, and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

We are committed to the health and safety of our employees, patients and other partners in the healthcare community. We work to promote an environment of awareness and shared responsibility for safety and regulatory compliance throughout our organization, in order to minimize risks of injury, exposure, or business impact.

With respect to the ongoing COVID-19 pandemic, we implement and oversee appropriate safety protocols, procedures and training, which align with applicable CDC guidance and state and local rules and regulations in order to minimize the spread of COVID-19 in our teams and communities. We continue to have flexible work arrangements for our employees and contractors and avoid non-essential work-related travel when possible.

We appreciate one another's differences and strengths and are proud to be an Equal Opportunity Employer. We value diversity of backgrounds and perspectives and our policy is that we do not discriminate based on race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, military and veteran status, sexual orientation or any other protected characteristic as established by federal, state or local laws.

Available Information

Additional information about Vericel is included on our website, www.vcel.com. Information on our website is not incorporated by reference into this Annual Report. We make available on our website free of charge our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K as soon as reasonably practicable after those reports are filed with the Securities and Exchange Commission ("SEC"). Our reports filed with the SEC are also made available on its website at www.sec.gov. The following Corporate Governance documents are also posted on the Investor Relations section of our website: Corporate Governance Guidelines, Code of Business Conduct and Ethics, Code of Ethics for Senior Financial Officers, Insider Trading Policy, Special Trading Procedures for Insiders, Board Member Attendance at Annual Meetings Policy, Director Nominations Policy, Shareholder Communications with Directors Policy and the Charters for each of the Committees of the Board of Directors.

Item 1A. *Risk Factors*

Our operations and financial results are subject to various risks and uncertainties, including those described below, that could adversely affect our business, financial condition, results of operations, cash flows, and trading price of our common stock. The risks and uncertainties described below are not the only ones we face. There may be additional risks and uncertainties that are not known to us or that we do not consider to be material at this time. If the events described in these risks occur, our business, financial condition, and results of operations would likely suffer. See "Cautionary Note Regarding Forward-Looking Statements" and the risks of our businesses described elsewhere in this Annual Report on Form 10-K.

Risks Related to the COVID-19 Pandemic

The current and ongoing pandemic of COVID-19 and the future outbreak of other highly infectious or contagious diseases, could seriously harm our research, development and commercialization efforts, increase our costs and expenses and have a material adverse effect on our business, financial condition and results of operations.

Broad-based business or economic disruptions could adversely affect our ongoing or planned research, development and commercialization activities. For example, the COVID-19 pandemic has created significant disruptions to the U.S. and global economy and has contributed, at times, to significant volatility in financial markets. The global impact of the pandemic has fluctuated since early 2020. At times, many state, local and national governments – including those in Massachusetts and Michigan, where our operations are located – have responded by issuing, extending and supplementing orders requiring quarantines, restrictions on travel, and the mandatory closure of certain non-essential businesses, among other actions. In the U.S., the status and application of these orders have varied on a state-by-state basis since the early days of the pandemic. Many of the restrictions have been periodically updated as infection rates in the U.S. have risen and fallen, as new virus variants have emerged, as vaccines have been distributed and administered, and as world health leaders learn more about the virus, its transmission pathway and who is most at risk. Because Vericel is deemed an essential business, we have been exempted from government orders requiring the closure of workplaces and the cessation of business operations as they have existed from time-to-time during the pandemic.

Even though widespread distribution of vaccines designed to protect against COVID-19 infection began in the U.S. and other countries throughout the world in early 2021, the pandemic remains unpredictable, and the number of COVID-19 infections has fluctuated significantly in various geographies during 2020 and throughout 2021 and could continue to do so, particularly in light of emerging variant strains. As such, some state and local governments have re-instituted restrictions on businesses, travel, and personal activities from time-to-time and additional such measures may occur in the future as the pandemic evolves.

At the outset of the pandemic, we put in place a comprehensive workplace protection plan, which instituted protective measures in response to COVID-19. At all times, our workplace protection plan has closely followed guidance issued by the CDC and has complied with applicable federal and state law. We have continued to regularly review our policies and procedures as the pandemic has evolved and will continue to do so – balancing the need to protect our workforce, customers

and partners from COVID-19 infection with the need to continue optimal business operations and the delivery of MACI and Epicel to the patients we serve. Future actions that we take may result in disruption to our business.

The extent to which the ongoing COVID-19 pandemic, or the future outbreak of any other highly infectious or contagious disease, impacts our preclinical studies, clinical trial operations and current or future commercialization efforts will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the scope, severity and duration of such pandemic, the actions taken to contain the pandemic or mitigate its impact, and the direct and indirect economic effects of the pandemic and containment measures, among others. The rapid development and uncertainty of this situation precludes any prediction as to the full adverse impact of the COVID-19 pandemic. Nevertheless, the COVID-19 pandemic has and could continue to adversely affect our business, financial condition and results of operations, and it may have the effect of heightening many of the risks described herein, including the below.

- Hospitals, health systems and surgeons minimized, postponed, or canceled electively scheduled surgeries during the initial wave of the pandemic in the spring of 2020. These actions were followed by numerous state-level executive orders either restricting or partially restricting elective surgeries. Because MACI is an elective surgical procedure, as a result of these restrictions we experienced a significant increase in cancellations of scheduled MACI procedures as well as a slowdown in new MACI orders during March and April of 2020, which negatively impacted our business and results of operations during the first and second quarters of 2020. The level and degree of restriction on elective surgeries, on the ability of patients to seek treatment and on U.S. business operations generally fluctuated throughout 2020 as COVID-19 infection rates rose and fell during the summer months and into the autumn. By the first quarter of 2021, the pandemic's effects on our MACI business had largely dissipated. During the summer of 2021, however, some patients postponed or delayed treatment with MACI in order to take vacation and/or travel following the lifting of COVID-19-related restrictions that had been in place in many parts of the country for more than a year. Additionally, the surge of new COVID-19 infections seen throughout the U.S. during the second half of 2021, resulting from the spread of the "Delta" and "Omicron" variants again caused disruptions to health care networks, the postponement or cessation of elective surgical procedures, like MACI, and overall patient behavior. These effects were compounded by staffing shortages at many healthcare facilities across the U.S. during the same period. Consequently, and notwithstanding the widespread distribution of vaccines in the U.S., these factors contributed to a slowdown of MACI procedures during the third and fourth quarters of 2021. The risk remains that regional or local restrictions could again be placed on the performance of elective surgical procedures if the number of COVID-19 infections in the U.S. were to continue to rise, or if new or existing COVID-19 variants render current vaccine treatments ineffective. We believe our MACI business will be negatively impacted if elective surgical procedures are again materially restricted. Further, renewed and material disruption to the operations of our employees, distributors, suppliers or customers will impact our sales and operating results and could lead to potential impairments to inventory and accounts receivable. Although Epicel has been less directly impacted by the pandemic given the critical nature of severe burn injuries, it is difficult to ascertain the current or future impact of COVID-19 on the treatment of severe burns.

- We continue to manufacture MACI and Epicel and we maintain a significant safety back-up of all key raw materials. We do not currently expect that supply chain interruptions will impact our ongoing manufacturing operations. However, we currently rely on both domestic and international third parties to, among other things, manufacture and supply raw materials, which are used to produce our products, and supply other goods and services to run our business. If any such third parties in our supply chain are adversely impacted by current or future restrictions or executive orders resulting from the ongoing COVID-19 pandemic for an extended period of time, including staffing shortages, production slowdowns, disruptions in delivery systems, or federal, state or foreign orders requiring the diversion of key supplies for use in the production or manufacturing of vaccines designed to inoculate individuals against COVID-19, our supply chain may be disrupted, limiting our ability to manufacture our products and product candidates and conduct our research and development operations, or commercially launch any of our product candidates, if approved. With respect to customer delivery, MACI final product has an established shelf life of six (6) days and established shipping shelf life of three (3) days. Currently, MACI is picked-up by courier and shipped by commercial air or ground transportation to our customers' locations. Epicel final product has an established shelf life of 24 hours and is hand carried to customer hospital sites by courier. Transportation is primarily by commercial or charter airline. Although we have not experienced material shipping delays or increased costs to date, significant disruption of air travel in the future could result in the inability to deliver MACI or Epicel final products to customer sites within appropriate timeframes, which would have a material adverse effect on our business and results of operations.

- The documented and ongoing world-wide supply chain disruptions may adversely impact our ability or the ability of others, including hospitals, to utilize MACI or Epicel.

- As public health data warranted, at various times during the pandemic we restricted on-site staff in our facilities to only those personnel and contractors who are required to perform essential activities related to the manufacture, production and delivery of our products. During these periods, we encouraged the majority of our remaining employees to work remotely. To date, we have been successful in sustaining our operations and providing MACI and Epicel to patients in need. We continue to review our policies and procedures regularly, including our workplace protection plan, as the pandemic evolves and we may take additional actions to the extent required. We expect that some of our employees will continue to work remotely from time to time. A resurgence of COVID-19, COVID-19 variants, or similar infectious diseases in the U.S., however, may lead to future government-imposed quarantines and restrictions, which may result in the closure of our administrative offices, with our employees working outside of our offices for an extended period of time. These actions may also result in the disruption of our manufacturing operations, which are currently accomplished within our administrative offices. Additionally, such quarantines and restrictions may adversely affect our ability to conduct certain product enhancement and business development activities.

- Our partial reliance on certain personnel working from home may also increase our cyber security risk, create data accessibility concerns, and make us more susceptible to communication disruptions, any of which could adversely impact our business operations or delay necessary interactions with local and federal regulators, institutional review boards and ethics committees, third-party contractors and suppliers, clinical trial sites and other important agencies and contractors. Our business operations may be further disrupted if any of our employees, officers or directors contract an illness related to COVID-19 and are unable to perform their duties. For example, COVID-19 illness could impact members of management or our board of directors resulting in absenteeism from management meetings or meetings of the directors or committees of directors, and making it more difficult for management to effectively oversee our daily operations, or to convene the quorums of the full board of directors or its committees needed to conduct meetings for the management of our affairs. A resurgence of COVID-19 or COVID-19 variants may cause our employees, and employees of third-party contractors and licensees, including MediWound, responsible for conducting research and development activities to be unable to access laboratories and places of business for an extended period of time as a result of the temporary closure of such workspaces. As a result, this could delay timely completion of ongoing clinical trials or preclinical activities, and our ability to select future development candidates.

- NexoBrid is currently a pre-commercial product in North America. On June 29, 2021, we announced that MediWound had received a complete response letter from the FDA regarding the BLA and the agency communicated to MediWound that it had completed its review of the BLA, as amended, and had determined that it cannot approve the BLA in its present form. We announced further that we are working with MediWound and the FDA to address the issues identified by the FDA to seek potential approval of NexoBrid. Health regulatory agencies, including the FDA, have experienced and may continue to experience disruptions in their operations as a result of the continued spread or resurgence of the ongoing COVID-19 pandemic. For instance, the COVID-19 pandemic may impact the FDA's response times to regulatory submissions, like a BLA resubmission in response to the complete response letter, and its ability to monitor our clinical trials. Additionally, in many instances across the industry, the FDA has postponed, or has been unable to conduct certain inspections of domestic and international manufacturing facilities in connection with its regulatory review of product applications as a result of travel and other restrictions caused by the pandemic. As part of its review of the BLA, and any BLA resubmission, the FDA has communicated to MediWound that physical cGMP inspections of manufacturing facilities in Israel and Taiwan are required before the BLA can be approved, as the FDA must assess the ability of those facilities to conduct certain manufacturing operations in compliance with cGMP. The FDA indicated that because of restrictions on travel caused by the COVID-19 pandemic, the agency was unable to conduct the required inspections of those facilities during the original BLA review cycle. Should continued restrictions prevent or delay the FDA in conducting necessary reviews or physical inspections of the manufacturing facilities involved in the production of NexoBrid, or should other events impact the FDA's response times, the timeline for approval of NexoBrid could be materially and further delayed, which could materially affect the development, study and ultimate commercialization of the product.

- The trading prices of our common stock and that of other biopharmaceutical companies have been highly volatile during the COVID-19 pandemic. As a result, we may face difficulties raising capital through sales of our common stock or such sales may be on unfavorable terms. In addition, a recession, depression or other sustained adverse market event resulting from the ongoing COVID-19 pandemic could materially and adversely affect our business and the value of our common stock.

- The negative economic effects of the pandemic have, at times, caused increased unemployment in the U.S. resulting in many individuals losing their employer-based insurance coverage. The continued or future unemployment of our potential patients may adversely affect our ability to commercialize our products. In addition, market disruption or rising unemployment caused by the ongoing COVID-19 pandemic or a variant strain thereof may lead to delays in obtaining insurance coverage and reimbursement of newly approved products as well as an increase in the numbers of uninsured patients and patients who may no longer be able to afford their co-insurance or co-pay obligations. These factors may lead to decreased utilization of our products, which could reduce revenue. The ongoing COVID-19 pandemic may also negatively impact our commercialization strategy for our products and product candidates, if approved. At times during the pandemic, hospitals and other medical institutions have reduced and diverted staffing, diverted resources to patients suffering from COVID-19 and limited hospital access for non-patients, which has included our sales personnel. Hospitals may continue or increase these and similar measures in the future should the COVID-19 virus and any future variants continue to spread or surge in certain areas. In addition, COVID-19 levels in the U.S. and/or specific regions of the U.S. may cause customers or patients to postpone or cancel previously scheduled surgeries or to decline to schedule surgeries utilizing our products, which would negatively impact our operations and financial results. Although many face-to-face interactions have resumed, our sales personnel, at times, have conducted, and may continue to have to conduct, many of their interactions with physicians and patients through the use of webinars, telemedicine, direct-to-consumer advertising and social media. These circumstances may adversely affect the ability of our sales professionals to effectively market our products to physicians in the future, which may have a negative impact on our potential sales and our market penetration.

If any of these risks related to the impact of the ongoing COVID-19 pandemic were to occur, our preclinical activities, clinical development progress, data and timelines, commercialization efforts including any potential revenue from sales, supply chain continuity, and general business operations could be delayed and/or materially harmed and our business, prospects, financial condition, and results of operations would suffer as a result. The extent to which the current pandemic, or a future pandemic, impacts our business and operations will depend on future developments, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and governmental actions to contain the outbreak or treat its impact, which are highly uncertain and cannot be predicted with confidence.

Risks Related to Our Operations

We may experience significant quarterly and annual fluctuations in our results of operations due to a number of factors.

Our quarterly and annual results of operations may fluctuate significantly due to a variety of factors, many of which are outside of our control. This variability may lead to volatility in our stock price as investors and research analysts respond to quarterly fluctuations. In addition, comparing our results of operations on a period-to-period basis, particularly on a sequential quarterly basis, may not be meaningful. You should not rely on our past results as an indication of our future performance.

Factors that may affect our results of operations include:

- the timing of new orders and revenue recognition for new and prior year orders;
- seasonal buying patterns of our customers;
- volatility in the sales of our products;
- volume of revenues;
- competitive developments;
- changes in third-party coverage and reimbursement for our products;
- our ability to supply and meet customer demand for our products;
- our ability to increase sales to our existing customers, particularly larger customers;
- our ability to attract new customers;
- our ability to develop and achieve market adoption of our products;
- the impact of a recession or any other adverse global economic conditions on our business;
- the impact of the ongoing COVID-19 pandemic, or the future outbreak of another highly infectious or contagious disease;
- erosion in margins or significant fluctuations in revenues caused by changing customer demand;
- the timing and cost of hiring personnel and of large expenses such as third-party professional services;
- stock-based compensation expenses, which vary along with changes to our stock price;
- supply chain disruptions or constraints;
- fluctuations in foreign currency exchange rates; and
- future accounting pronouncements or changes in accounting rules or our accounting policies.

The foregoing factors are difficult to forecast, and these, as well as other factors, could materially adversely affect our quarterly and annual results of operations. There can be no assurance that the level of revenues and profits, if any, achieved by us in any particular fiscal period, will not be significantly lower than in other comparable fiscal periods. For example, the rate at which MACI biopsies convert to implants has generally been consistent since the product was first commercially launched in 2017, although the disruptions caused by the COVID-19 pandemic effected this conversion rate at times during 2021. We cannot be certain that this rate will remain constant in the future, and if this rate were to decline, our revenue growth could be negatively impacted. In addition, our expense levels are based, in part, on our expectations as to future revenues. As a result, if future revenues are below expectations, net income or loss may be disproportionately affected by a reduction in revenues, as any corresponding reduction in expenses may not be proportionate to the reduction in revenues. If we fail to achieve our quarterly forecasts, if our forecasts fall below the expectations of investors or research analysts, or if our actual results fail to meet the expectations of investors or research analysts, our stock price may decline.

Seasonal sales patterns and other variations related to our revenue recognition may cause significant fluctuations in our results of operations and cash flows and may prevent us from achieving our quarterly or annual forecasts, which may cause our stock price to decline.

Historically, and specifically prior to the COVID-19 pandemic, we have had significant seasonal patterns in product orders with the highest volume occurring in the fourth quarter and the lowest volume occurring in the first quarter. As a result, a significantly higher percentage of our annual revenues have historically been recognized in the fourth quarter and the lowest percentage of annual revenues in the first quarter of a given calendar year. This is due to a number of factors, including insurance deductible limits and the time of year during which patients prefer to start rehabilitation. We expect to continue to experience this seasonality of our business in subsequent years after the COVID-19 pandemic and its related implications have ended.

Our quarterly growth in revenues also may not align with new orders that we receive in a given quarter, which could mask the impact of seasonal variations. This mismatch can be due to the timing of revenue recognition.

Seasonal and other variations related to our revenue recognition may cause significant fluctuations in our results of operations and cash flows, may make it challenging for an investor to predict our performance on a quarterly basis and may prevent us from achieving our quarterly or annual forecasts or meeting or exceeding the expectations of research analysts or investors, which in turn may cause our stock price to decline.

Our operating results will be harmed if we are unable to effectively manage and sustain our future growth or scale our operations.

There can be no assurance that we will be able to manage our future growth efficiently or profitably. Our business remains unproven at a large-scale operational level and actual revenue and operating margins, or revenue and margin growth, may be less than expected. If we are unable to scale our production capabilities efficiently or maintain pricing without significant discounting, we may fail to achieve expected operating margins, which would have a material and adverse effect on our operating results. For example, we are planning to move to a larger facility to support our potential growth, but if the construction and customization of such facility is delayed, we may be limited in our ability to meet future demand for our products. Growth may also stress our ability to adequately manage our operations, quality of products, safety and regulatory compliance. If growth significantly decreases it will negatively impact our cash reserves, and we may be required to obtain additional financing, which may increase indebtedness or result in dilution to shareholders. Further, there can be no assurance that we would be able to obtain additional financing on acceptable terms, if at all.

If we do not manage inventory in an effective and efficient manner, it could adversely affect our results of operations.

Many factors affect the efficient use and planning of inventory of certain components and other materials used in our cell manufacturing process to manufacture our marketed products, such as effectiveness of predicting demand, effectiveness of preparing manufacturing to meet demand, efficiently meeting product demand requirements and expiration of materials in inventory. We may be unable to manage our inventory efficiently, keep inventory within expected budget goals, keep inventory on hand or manage it efficiently, control expired inventory or keep sufficient inventory of materials to meet product demand due to our dependence on third-party suppliers. Finally, we cannot provide assurances that we can keep inventory costs within our target levels. Failure to do so may harm our long-term growth prospects.

We have incurred losses and may not achieve consistent profitability for some time or at all.

For the year ended December 31, 2021 we reported net loss of $7.5 million. Prior to that, with the exception of the year ended December 31, 2020, when we reported net income of $2.9 million, we had incurred net losses each year since our inception in 1989. As of December 31, 2021, we had accumulated a deficit of approximately $383.3 million and $129.3 million of cash, cash equivalents and investments. Based on our current plan and existing cash, cash equivalents and investments on hand we are positioned to sustain current operations through at least 12 months following the issuance of the consolidated financial statements included in this Annual Report on Form 10-K.

Although we believe we can continue to achieve profitability without the need to raise additional capital, we may incur significant operating losses over the next several years despite sales increasing and margins improving, due to continuing expenses related to research and development, and the expense associated with continuing the commercialization of our approved products. We cannot predict with any certainty the existence or amount of future losses. Our ability to maintain profitability will depend on, among other things, increasing sales of our current products, improving gross margins, successfully commercializing new products, completing the development of our future product candidates, timely initiation and completion of clinical trials, obtaining regulatory approvals, establishing manufacturing, sales and marketing arrangements with third parties, maintaining supplies of key manufacturing components and the possible acquisition and development of additional and complementary products. Therefore, we may not be able to achieve or sustain profitability.

In the longer term, we may need to raise additional funds in order to continue to complete product development programs and the clinical trials needed to obtain approval for and commercialize our future product candidates, or to capitalize on potential strategic opportunities. We cannot be certain that actual results will not differ materially from our current projections and that current capital will be sufficient to achieve profitability or that funding will be available on favorable terms, if at all. Some of the factors that will impact our ability to raise additional capital and our overall success include:

- The ability to maintain our manufacturing facility’s compliance with FDA requirements, including establishment and product fees;
- The requirements necessary to maintain in good standing marketing authorizations and licenses from regulatory bodies in the U.S. and other countries;
- The liquidity and market volatility of our equity securities;
- Regulatory and manufacturing requirements and uncertainties;
- Anticipating technological developments by competitors;
- The rate and degree of progress of our product development; and
- The rate and cadence of the regulatory approvals needed to proceed with clinical development programs.

Our products and product development programs are based on novel technologies and are inherently risky, which may decrease the chances of regulatory approval and could have material adverse effect on our financial condition and operating results.

Our products are subject to the inherent risks of failure associated with the development of new products based on novel technologies. The innovative nature of our therapeutics creates significant challenges with regard to product development and optimization, manufacturing, regulatory environment and emerging regulations, third-party reimbursement and market acceptance. Therapeutic advancements are generally ahead of development and release of regulatory guidance and requirements. The lack of established precedents and evolving regulatory policy for novel products can pose significant challenges in product and clinical development, which can decrease the chances of regulatory success.

Our products represent new classes of therapy that the marketplace may not understand or accept. Furthermore, the success of our products is dependent on wider acceptance by the medical community.

While our products have had some commercial success to date, the broader market may not understand or accept our products. Our products represent new treatments or therapies and compete with a number of more conventional products and therapies manufactured and marketed by others. The nature of our products creates significant challenges with regard to product development and optimization, manufacturing, regulations, and third-party reimbursement. As a result, the commercialization of our current products and the development pathway for our potential new products may be subject to increased scrutiny, as compared to the pathway for more conventional products.

The degree of market acceptance of any of our marketed or potential new products will depend on a number of factors, including:

- The clinical safety and effectiveness of our products and their demonstrated advantage over alternative treatment methods;
- Our ability to demonstrate to healthcare providers that our products provide a therapeutic advancement over standard of care treatment or other competitive products and methods;
- Our ability to educate healthcare providers on the autologous use of human tissue, to avoid potential confusion with, and differentiate ourselves from, the ethical controversies associated with human fetal tissue and engineered human tissue;
- Our ability to educate healthcare providers, patients and payers on the safety and adverse reactions involving our products;
- Our ability to meet supply and demand and develop a group of medical professionals familiar with and committed to the use of our products; and
- The cost-effectiveness of our products and the reimbursement policies of government and third-party payers.

If the medical community or patients do not accept the safety and effectiveness of our products, it could negatively affect our ability to sell those products, which would have a material adverse impact on our business, financial condition and operations.

Failure to enter into written agreements with payers for reimbursement of our products and to obtain adequate reimbursement and reimbursement rates could have a material adverse effect on our financial condition and operating results.

We have a limited network of specialty pharmacy distributors for MACI, and we primarily rely on our specialty pharmacy distributors' contracts with third-party payers for reimbursement. Under our distribution agreements with Orsini and AllCare, we assume the credit and collection risk of third-party payers, as Orsini and AllCare dispense MACI and perform the collection activities. We also sell a portion of MACI implants directly to facilities based on prices stated in an approved contract or an applicable purchase order with the facility. Often the contracted rates are tied to the facility's third-party reimbursement from an underlying insurance provider. We sell Epicel directly to hospitals based on contracted rates stated in an approved contract or an applicable purchase order with the hospital.

Failing to maintain and obtain written agreements from payers for reimbursement of our products or to obtain adequate reimbursement rates could have a material adverse effect on our financial condition and operating results. In addition, healthcare providers are under pressure to increase profitability and reduce costs. We cannot predict the extent to which reimbursement for our products will be affected by initiatives to reduce costs for healthcare providers. Failure to collect from such payers or to obtain or maintain written agreements with such payers or obtaining lower than estimated reimbursement for our products would adversely affect our business, financial conditions and results of operations.

A cyber security incident could result in a loss of confidential data, give rise to remediation and other expenses, expose us to liability under HIPAA, consumer protection and privacy laws, or other common law theories, subject us to litigation and federal and state governmental inquiries, damage our reputation, and otherwise be disruptive to our business.

We collect and store sensitive information, including intellectual property and personally identifiable information, on our networks. The secure maintenance of this information is critical to our business operations. We have implemented multiple layers of security measures to protect this confidential data through technology, processes, and our people. We utilize current security technologies, and our defenses are monitored and routinely reviewed by internal and external parties. Despite these efforts, threats from malicious persons and groups, new vulnerabilities, and advanced and increased attacks against our and our third-party service providers' or partners' information systems create risk of cyber security incidents. Potential attacks could include use of harmful malware or ransomware, and our information technology systems could be compromised by outside parties intent on extracting ransom or information, corrupting data or disrupting business practices. There can be no assurance that we will not be subject to cyber security incidents that evade our security measures, result in the loss of personal health information or other data subject to privacy laws or disrupt our information systems and business. As a result, cyber security and the continued development and enhancement of our controls, processes and practices designed to protect our information systems from attack, damage or unauthorized access remain a priority for us. As cyber threats continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any cyber security vulnerabilities. The occurrence of any of these events could result in interruptions, delays, the loss, access, misappropriation, disclosure or corruption of data, liability under privacy, security and consumer protection laws

or litigation under these or other laws, including common law theories, and subject us to federal and state governmental inquiries, any of which could have a material adverse effect on our financial position and results of operations and harm our business reputation.

In addition, regulators globally are also imposing greater monetary fines for privacy violations. For example, in 2016, the EU adopted a new regulation governing data practices and privacy called the General Data Protection Regulation ("GDPR"), which became effective on May 25, 2018. The GDPR applies to any company established in the EU as well as to those outside the EU if they collect and use personal data in connection with the offering of goods or services to individuals in the EU or the monitoring of their behavior. The GDPR enhances data protection obligations for processors and controllers of personal data, including, for example, expanded disclosures about how personal information is to be used, limitations on retention of information, mandatory data breach notification requirements and onerous new obligations on services providers. Non-compliance with the GDPR may result in monetary penalties of up to €20 million or 4% of worldwide revenue, whichever is greater. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of personal data, such as healthcare data or other sensitive information, could greatly increase our cost of providing our products and services or even prevent us from offering certain services in jurisdictions that we may operate in.

We rely on complex information technology systems for various critical purposes, including timely delivery of products and maintaining patient confidentiality. If these systems fail or are disrupted, we could lose product sales and our revenue and reputation would suffer.

We have developed comprehensive, integrated information technology (“IT”) systems for the intake of physician orders for our products, to track product delivery, and to store patient-related data that we obtain for purposes of manufacturing MACI and Epicel. We rely on these systems to maintain the chain of identity for each autologous product, and to ensure timely delivery of product, prior to expiration. Each of our products has a limited usable life measured in days from the completion of the manufacturing process to patient implant or grafting. Accordingly, maintaining accurate scheduling logistics is critical. In addition, these IT systems store and protect the privacy of certain patient information, which is required for the manufacture of our individualized cell therapy products. We have also developed an integrated information technology system for benefit coordination for MACI patients who have opted-in to the My Cartilage Care program, which we use with our benefit coordination contractor and our contracted specialty pharmacies. This system contains patient-related information some of which is accessible by company personnel and healthcare professionals for surgery coordination activities. If any of our systems were to fail or be disrupted for an extended period of time, we could lose product sales and our revenue and reputation would suffer. Similarly, in the event our systems were to be breached by an unauthorized third-party, that party could potentially access the aforementioned patient information, which could cause us to suffer further reputational damage and loss of customer confidence. Any one of these events could cause our business to be materially harmed and our results of operations would be adversely impacted.

Our inability to complete our product development activities successfully would materially limit our ability to operate or finance our operations.

In order to obtain regulatory approvals necessary to commercialize future product candidates in the U.S., we must conduct adequate and well-controlled clinical trials to demonstrate the safety and effectiveness of those products, in compliance with current regulatory requirements. We may not be able to successfully complete the development of future product candidates, or successfully market our technologies or future product candidates. We, and any of our potential collaborators, may encounter problems and delays relating to research and development, regulatory approval and intellectual property rights of relevant technologies and future product candidates. Our research and development programs may not be successful, or our cell therapy technologies and future product candidates may not facilitate the production of cells outside the human body with the expected results. Additionally, our technologies and future product candidates may not prove to be safe and effective in clinical trials, and we may not obtain the requisite regulatory approvals for our product candidates. If any of these events occur, our future prospects may be adversely impacted.

We must successfully complete nonclinical and clinical development to be able to demonstrate safety and efficacy to seek marketing approval of our current or future product candidates. Lack of efficacy and or safety events can lead to the discontinuation of clinical development, and this can occur at any stage of the clinical development program. We may experience numerous unforeseen events during development that can delay or prevent commercialization of our future development candidates.

The results of early stage clinical trials do not ensure success in later clinical trials, and interim results are not necessarily predictive of final results. Data obtained from clinical activities are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval.

Additionally, several of our ongoing clinical trials utilize an "open-label" trial design. An "open-label" clinical trial is one where both the patient and investigator know whether the patient is receiving the investigational product candidate or either an existing approved drug or placebo. Most typically, open-label clinical trials test only the investigational product candidate and sometimes may do so at different dose levels. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect as patients in open-label clinical trials are aware when they are receiving treatment. Open-label clinical trials may be subject to a "patient bias" where patients perceive their symptoms to have improved merely due to their awareness of receiving an experimental treatment. In addition, open-label clinical trials may be subject to an "investigator bias" where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. The results from an open-label trial may not be predictive of future clinical trial results with any of our product candidates for which we include an open-label clinical trial when studied in a controlled environment with a placebo or active control.

Our planned clinical trials may not begin or be completed on schedule, if at all. Typically, if a biological product is intended to treat a chronic disease, safety and efficacy data must be gathered over an extended period of time, which can range from six months to three years or more.

With respect to any clinical trials affecting our approved products or future development candidates, failures or delays can occur at any stage of the trials, and may be directly or indirectly caused by a variety of factors, including but not limited to:

- Delays in securing clinical investigators or trial sites for our clinical trials and their subsequent performance in conducting accurate and reliable trials on a timely basis;
- Delays in obtaining IRB and other regulatory approvals to commence a clinical trial;
- Slower than anticipated rates of patient recruitment and enrollment in our clinical trials, or failing to reach the targeted number of patients due to competition for patients from other trials;
- Limited or no availability of coverage, reimbursement and adequate payment from health maintenance organizations and other third-party payers for the use of biological products supplied for use in our clinical trials;
- Negative or inconclusive results from clinical trials;
- Unforeseen adverse effects interrupting, delaying, or halting clinical trials of any future therapeutic product candidates, and possibly resulting in the FDA or other regulatory authorities denying approval of any future therapeutic product candidates;
- Unforeseen safety issues;
- Approval and introduction of new therapies or changes in standards of practice or regulatory requirements or guidance that render our clinical trial endpoints or the targeting of our proposed indications obsolete;
- Inability to monitor patients adequately during or after treatment or problems with investigator or patient compliance with the trial protocols;
- Inability to replicate in large controlled trials safety and efficacy data obtained from a limited number of patients in uncontrolled trials;
- Inability or unwillingness of medical investigators to follow our clinical protocols; and
- Unavailability of clinical trial supplies.

The FDA, the IRBs, and the sponsor monitor the progress of clinical trials and they may suspend or terminate a clinical trial at any time because of concerns related to patient safety or for other considerations. The FDA may impose a clinical hold on our trials because of safety concerns that have arisen for products or product candidates that are similar to our product candidates. Even when successful clinical results are reported for a product from a completed clinical trial, the durability of response may not be sustained over time, or may not be sufficient to support regulatory approval.

Our current product development activities include but are not limited to projects directed at expanding clinical indications, increasing the ease of use of our products for our customers, and decreasing the cost of manufacturing our products. These production process changes may alter the functionality of our cells and require various additional levels of experimental and clinical testing and evaluation. Any such testing could lengthen the time before these product enhancements would be commercially available.

We rely on third parties to conduct some of our clinical trials, and their failure to perform their obligations in a timely or competent manner may delay development and/or impact commercialization, if approved, of our current and future product candidates.

We use clinical research organizations ("CROs") to assist in the conduct of our clinical trials. We may face delays outside of our control if these parties do not perform their obligations in a timely or competent fashion, or if we are forced to change service providers. Any third-party that we hire to conduct clinical trials may also provide services to our competitors, which could compromise the performance of their obligations to us. If we experience significant delays in the progress of our clinical trials, the commercial prospects for our current and future product candidates could be harmed and our ability to generate product revenue would be delayed or prevented. In addition, we and any provider that we retain will be subject to GCP requirements. If GCP and other regulatory requirements are not adhered to by us or our third-party providers or clinical investigators, the conduct of the trial may be compromised and the development and commercialization of our current and future product candidates could be delayed or approval may never be obtained.

Any failure by a CRO, a clinical trial site, or clinical investigator, or us to successfully accomplish clinical trial monitoring, data collection, safety monitoring and reporting, and data management and other services in a timely manner and in compliance with regulatory requirements could have a material adverse effect on our ability to utilize the trial to obtain regulatory approval or complete clinical development of our product candidates to support regulatory approval. Problems with the timeliness or quality of the work of a CRO or a clinical trial site or clinical investigator may lead us to seek to terminate the relationship and use an alternate provider. However, making such changes may be costly and may delay our trials, could affect regulatory approval and contractual restrictions may make such a change difficult or impossible. Additionally, it may be difficult to find a replacement organization that can conduct our trials in an acceptable manner and at an acceptable cost.

We face intense competition in the markets targeted by our products. Many of our competitors have substantially greater resources than we do, and we expect that all of our products will face intense competition from existing or future products, which may impact our ability to successfully commercialize our products.

All of our products face intense competition from existing and future products marketed by large companies. These competitors may successfully market products that compete with our products, identify and bring to market new product candidates earlier than we do, or develop products that are more effective or less costly than our products. These competitive factors could require us to conduct substantial new research and development activities to establish new product targets, which would be costly and time consuming. These activities can adversely impact our ability to effectively commercialize products and achieve revenue and profits.

If we do not keep pace with our competitors and with technological and market changes, our products will become less attractive or obsolete and our business may suffer.

The markets for our products are highly competitive, subject to rapid technological changes, and vary for different product candidates and processes that directly compete with our products. Our competitors in the medical and biotechnology industries may have superior products, research and development, manufacturing, and marketing capabilities, financial resources or marketing positions. Furthermore, our competitors may have developed, or could in the future develop, new technologies that compete with our products or even render our products obsolete.

To the extent that others develop new technologies that address the targeted application for our products, our business will suffer. Finally, if we are unable to continue to develop and market new products and technologies in a timely manner, the demand for our products may decrease or our products could become obsolete, and our revenue may decline or our growth prospects may be adversely affected.

Restrictions on the use of animal-derived materials could harm our product development and commercialization efforts.

Some of the manufacturing materials and/or components that we use in, and which are critical to, implementation of our technology involve the use of animal-derived products, including fetal bovine serum. Supplier changes or regulatory actions

may limit or restrict the availability of such materials for clinical and commercial use for a variety of reasons including contamination or perceived risk of contamination with an adventitious agent, such as bovine spongiform encephalopathy, in one of our suppliers' herds. This may lead to a restricted supply of the serum currently required for our product manufacturing processes. Any restrictions on these materials would impose a potential competitive disadvantage for our products or prevent our ability to manufacture our cell products. The FDA and other regulatory agencies have issued regulations for controls over bovine material in animal feed. These regulations do not appear to affect our ability to purchase the manufacturing materials we currently use. However, regulatory agencies may introduce new regulations that could affect our operations. Our inability to develop or obtain alternative compounds would harm our product development and commercialization efforts. There are certain limitations in the supply of certain animal-derived materials, which may lead to delays in our ability to complete clinical trials or eventually to meet the anticipated market demand for our cell products.

If our licensing arrangement with MediWound is unsuccessful, our development of NexoBrid and its associated revenues may be limited.

We have entered into a licensing arrangement with MediWound for the development of NexoBrid in North America. However, there can be no assurance that this agreement and our and MediWound's efforts pursuant to it will result in FDA approval of NexoBrid, or that we will be able to market NexoBrid at a profit. Under the terms of the License Agreement, MediWound will continue to conduct all development activities under the supervision of a Central Steering Committee comprised of members of each party until the BLA is approved and subsequently transferred to Vericel. Collaboration and licensing arrangements pose many risks, including, but not limited to, the following:

- collaborations and licensing arrangements may be terminated;
- collaborators and licensors may delay clinical trials and prolong clinical development, or under-fund or stop a clinical trial;
- expected revenue might not be generated because product candidates may not be approved;
- collaborators and licensors could independently develop, or develop with third parties, products that could compete with our future products despite non-competition provisions;
- the terms of our contracts with current or future collaborators and license parties may not be favorable to us in the future;
- disputes may arise delaying or terminating the research, development, or commercialization of our product candidates, or result in significant and costly litigation or arbitration; and
- one or more third-party developers could obtain approval for a similar product prior to the product candidate resulting in unforeseen price competition in connection with the product candidate.

Product development is a lengthy and expensive process, with an uncertain outcome. If we are not able to successfully develop NexoBrid, there may be a material adverse impact on our business.

We intend to commercialize NexoBrid in the U.S. and potentially other North American countries. However, before we can commercialize NexoBrid, we must first obtain regulatory approval for the sale of NexoBrid in any jurisdiction, which includes the submission of an application utilizing completed and ongoing clinical studies to demonstrate that the product is safe and effective. We depend on MediWound for its efforts in completing clinical trials and other clinical activities pursuant to the development plan, obtaining regulatory approval and manufacturing and supplying NexoBrid.

Certain events could delay or prevent our ability to successfully gain regulatory approval, including:

- patients may not participate in necessary follow-up visits to obtain required data, which would result in significant delays in the clinical testing process;
- an audit of MediWound's supply chain or manufacturing facilities and/or processes could reveal noncompliance or a regulatory agency requires further testing or inspections of such processes;
- third-party contractors, such as a research institute, may fail to comply with regulatory requirements or meet their contractual obligations to MediWound;
- clinical or manufacturing-related data submitted to the FDA during BLA submission or re-submission may be found by the agency to be inadequate or incomplete;
- travel and other restrictions caused by the COVID-19 pandemic may limit or prohibit the FDA from conducting required CMC inspections of certain facilities involved in the production of NexoBrid, resulting in a delay of regulatory approval;
- undetected or concealed fraudulent activity by a clinical researcher, if discovered, could preclude the submission of clinical data prepared by that researcher, lead to the suspension or substantive scientific review of one or more of our

marketing applications by regulatory agencies, and result in the recall of any approved product distributed pursuant to data determined to be fraudulent; and

- an audit of preclinical or clinical studies by regulatory authorities may reveal noncompliance with applicable protocols or regulations, which could lead to disqualification of the results and the need to perform additional studies.

A significant delay or a failure to receive regulatory approval for NexoBrid in the U.S. may have a material adverse impact on our business.

NexoBrid's approval in the U.S. for the treatment of severe burns may be further delayed, or it may not be approved for use in the U.S. and other North American markets at all.

On September 16, 2020, we announced that the FDA had accepted for review MediWound's BLA seeking marketing approval for NexoBrid in the U.S. for the treatment of severe burns, and had assigned a PDUFA target date for the product of June 29, 2021. The BLA submission is based in large part on data derived from a U.S. Phase 3 pivotal study. MediWound is conducting twelve and twenty-four month safety follow-ups for cosmesis, function, quality of life and other safety measurements. Data from MediWound's twelve-month follow-up was submitted to FDA as part of the BLA submission. Data from the twenty-four month follow-up will be submitted to the agency as a safety update in connection with a BLA resubmission. While this and previous studies evaluating NexoBrid have met their primary endpoints, we cannot predict the outcome of the planned twenty-four month safety follow-ups or whether the FDA will approve the BLA based on the available preclinical and clinical data and the submitted manufacturing processes, and the cGMP data.

On June 29, 2021, we announced that MediWound received a complete response letter from the FDA regarding the BLA for NexoBrid. The FDA communicated to MediWound that it had completed its review of the BLA, as amended, and had determined that it cannot approve the BLA in its present form. The FDA identified issues related to the chemistry, manufacturing and controls, or CMC section of the BLA and had requested that MediWound provide additional CMC information. The FDA stated that it had not reviewed several amendments submitted by MediWound in response to the CMC information requests related to the BLA. The FDA also stated that inspections of manufacturing facilities in Israel and Taiwan are required before the BLA can be approved, but that it was unable to conduct the required inspections during the original review cycle due to COVID-19-related travel restrictions. In addition, the complete response letter referenced observations that were made during GCP inspections related to the DETECT study and requested that MediWound address questions regarding the impact of the observations on the study's efficacy findings. The FDA also requested that MediWound provide a safety update as part of a BLA resubmission.

While we intend to work with MediWound and the FDA to address the issues identified in the complete response letter to seek the potential approval of NexoBrid, we cannot predict how long it will take for MediWound and/or us to respond to the communication. We also cannot predict whether the FDA will accept any such resubmission for review, and, if such resubmission is accepted for review, the length of time of any subsequent FDA review. We also cannot predict whether the FDA will ultimately approve the NexoBrid BLA. In addition, if approval to market NexoBrid is sought in Mexico or Canada, we cannot predict how long regulatory authorities in those countries will take to provide NexoBrid with marketing authorization in their jurisdictions or whether such authorizations will be granted at all. A significant delay or a failure to receive regulatory approval for NexoBrid in the U.S. may have a material adverse impact on our business prospects.

There is no guarantee that NexoBrid will be accepted in the market even if regulatory approval is received.

The success of NexoBrid, if and when approved, depends upon the acceptance of NexoBrid by patients, the medical community and third-party payers, effectively competing with other products, a continued acceptable safety profile following approval and qualifying for, maintaining, enforcing and defending related intellectual property rights and claims. Even if we and MediWound successfully obtain regulatory approvals to market NexoBrid, our revenues will be dependent, in part, upon the size of the markets for which we gain regulatory approval. If the markets that we are targeting are not as large as we estimate and/or if the acceptance and use of NexoBrid within those markets is not as significant as we estimate, we may not generate significant revenues from sales of such products, if approved.

Our licensor, MediWound, is dependent on a contract with the U.S. Biomedical Advanced Research and Development Authority to fund the Phase 3 clinical trial and other development activities of NexoBrid in the U.S. and these contracts may be terminated by BARDA at any time.

MediWound has a contract with BARDA valued at up to $132.0 million for the advancement of the development and manufacturing, as well as the procurement, of NexoBrid in the U.S. Under the contract, BARDA has agreed to fund up to $56.0

million of the development costs of NexoBrid required to obtain marketing approval in the U.S., including its ongoing pediatric Phase 3 study and its expansion to include U.S. pediatric burn care sites, and has an option to further fund $10.0 million in development activities for other potential NexoBrid indications. BARDA confirmed its previous commitment, began procuring NexoBrid in August and December of 2020 and confirmed additional deliveries will occur over the subsequent five quarters for emergency stockpile, as part of the HHS mission to build national preparedness for public health medical emergencies. The initial BARDA procurement is valued at $16.5 million. In addition, BARDA holds an option to procure additional quantities of NexoBrid through funding of up to $50.0 million. BARDA recently awarded MediWound a new contract to develop NexoBrid for the treatment of Sulfur Mustard injuries as part of BARDA's preparedness for mass casualty events. The contract provides approximately $12 million of funding to support research and development activities up to pivotal studies in animals under the U.S. FDA Animal Efficacy Rule and contains options for additional funding of up to $31.0 million for additional development activities, animal pivotal studies, and the BLA submission for licensure of NexoBrid for the treatment of Sulfur Mustard injuries. MediWound also was recently awarded funding for the NexoBrid expanded access treatment ("NEXT") protocol being conducted under the FDA's expanded access program. However, the contracts provide that BARDA may terminate the contract at any time, at its convenience, without any further funding obligations. There can be no assurances that BARDA will not terminate the contract. Changes in government budgets and agendas may result in a decreased and de-prioritized emphasis on supporting the development of products for the treatment of severe burns such as NexoBrid. Any reduction or delay in BARDA funding may result in a decrease in planned development activities, including the development of NexoBrid for the treatment of Sulfur Mustard injuries and the NEXT study. In addition, the loss of funding may adversely affect MediWound's ability to complete the required activities to comply with its obligations under the License Agreement. This could lead to a modification of the financial provisions of our agreement or a significant delay in the development of NexoBrid. Further, we cannot provide any assurances as to when or whether BARDA's commitment for procurement of NexoBrid will occur or when or whether BARDA's option to fund additional development activities for NexoBrid will be exercised.

Risks Related to the Manufacturing and Production of Our Products

We have limited manufacturing capacity and our commercial manufacturing operations in the U.S. depend on one facility. If the facility is destroyed or we experience any manufacturing difficulties, disruptions, or delays, this could limit supply of our products or adversely affect our ability to conduct clinical trials and our business would be adversely impacted.

We presently conduct all of our commercial manufacturing operations in the U.S., at one facility located in Cambridge, Massachusetts. As a result, all of the commercial manufacturing for the U.S. market of our marketed products, MACI and Epicel, takes place at a single U.S. facility. If regulatory, manufacturing or other problems require us to discontinue production at the Cambridge facility, we will not be able to supply our products to our patients, which would adversely impact our business. If this facility, or some or all of the equipment in it, is significantly damaged or destroyed by fire, flood, power loss, catastrophic incident, or similar event, we will not be able to quickly or inexpensively replace our manufacturing capacity, and we may not be able to replace our facility at all. In the event of a temporary or protracted loss of the facility or critical equipment, we might not be able to transfer manufacturing to a third-party. Even if we could transfer manufacturing from one facility to a third-party, the shift would likely be expensive and time-consuming, particularly since an alternative facility would need to comply with applicable regulatory and quality standard requirements whereby validation and FDA approval would be required before any products manufactured at that facility could be made commercially available. In addition, we do not currently have a fully automated manufacturing process, which could potentially introduce contaminants to the production process or other problems due to human error.

While we do maintain insurance coverage against damage to our property and equipment, if we have underestimated our insurance needs, we will not have sufficient insurance to cover losses above and beyond the limits on our policies. Additionally, any supply interruption could harm our reputation and cause our product sales and profitability to suffer even after such supply interruption is corrected.

Failure of third parties, including for example Matricel GmbH, to manufacture or supply certain components, equipment, disposable devices and other materials used in our MACI or Epicel cell manufacturing processes would impair our cell product development and commercialization.

We rely on third parties, including Matricel GmbH ("Matricel") to manufacture and/or supply certain of our devices/manufacturing equipment and to manufacture and/or supply certain components, equipment, disposable devices and other materials used in our cell manufacturing process to manufacture our marketed cell therapy products and to develop our product candidates. In many instances these third parties serve as our sole suppliers. For example, Matricel is the sole supplier of the membrane for MACI. It would be difficult to obtain alternate sources of supply on a short-term basis due to the need for FDA approval of a new supplier. If any of our manufacturers or suppliers fails to perform its respective obligations, or if our supply

of certain components, equipment, disposable devices and other materials is limited or interrupted, it could impair our ability to manufacture our products, which would delay our ability to market our commercial products or future product candidates or conduct clinical trials on a timely and cost-competitive basis, if at all.

Many of our suppliers are sole or single source suppliers. We do not have long-term supply agreements with many of our third-party sole or single source suppliers of certain components and other materials used in our cell manufacturing process to manufacture our marketed cell therapy products. We purchase our required supply on a purchase order basis, and at any time the third-party suppliers could stop supplying our orders. FDA approval of a new supplier may be required if these materials become unavailable from our current suppliers. Although there may be other suppliers that have equivalent materials that would be available to us, FDA approval of any alternate suppliers, if required, could take several months or a year or more to obtain, if we could obtain such approval at all. Should we need to find alternate manufacturers or suppliers, we will also need to verify, such as through a manufacturing comparability study, that any new manufacturing process will produce our product candidate according to the specifications previously submitted to the FDA or another regulatory authority. Any delay, interruption or cessation of production by our third-party suppliers of important materials, any delay in qualifying new materials, if necessary, or any delay associated with the transition to and verification of any new manufacturers or suppliers would prevent or delay our ability to manufacture products. In addition, a supplier's variation in a raw material or testing, either unknown to us or incompatible with our manufacturing process, or any other problem with our materials, testing or components, would prevent or delay our ability to manufacture products. These delays may limit our ability to meet demand for our products, which would have a material adverse impact on our business, results of operations and financial condition.

We may be unable to establish any agreements with third-party suppliers or to do so on acceptable terms. Even if we are able to establish agreements with third-party suppliers, reliance on third-party suppliers entails additional risks, including the possible breach of the supply agreement by the third-party, and the possible termination or nonrenewal of the agreement by the third-party at a time that is costly or inconvenient for us.

In addition, we may not be able to continue our present arrangements with our suppliers, supplement existing relationships, establish and maintain new relationships or be able to identify and obtain the ancillary materials that are necessary to develop our product candidates in the future. Our dependence upon third parties for the supply and manufacture of these items could adversely affect our ability to develop and deliver commercial and commercially feasible products on a timely and competitive basis.

Failure by our third-party manufacturers, including Matricel, to comply with the regulatory requirements set forth by the FDA with respect to our products could limit our ability to manufacture commercial products.

Third-party manufacturers, such as Matricel, are subject to inspection by the FDA for cGMP compliance, as well as for their ability to manufacture the components, products or product candidates in compliance with the established process and procedure for the product or product candidate during an inspection. We may compete with other companies for access to these manufacturers' facilities and may be subject to delays in manufacture if the manufacturers give other clients higher priority than they give to us. If we are unable to secure and maintain third-party manufacturing capacity, the development and sales of our products and product candidates, if approved, and our financial performance may be materially affected.

Manufacturers of FDA-regulated products are obligated to operate in accordance with FDA-mandated requirements. A failure of any of our third-party manufacturers to establish and follow cGMP requirements and to document their adherence to such practices may lead to significant delays in the availability of material for clinical trials, may delay or prevent filing or approval of marketing applications for our future product candidates, and may cause delays or interruptions in the availability of our products for commercial distribution. This could result in higher costs to us or deprive us of potential product revenues.

Complying with cGMP, ICH and other non-U.S. regulatory requirements will require that we expend time, money, and effort in production, recordkeeping, and quality control to assure that the product or product candidate meets applicable specifications and other requirements. We, or our contracted manufacturing facility, must also pass a pre-approval inspection by the FDA for future product candidates, and are subject to routine FDA cGMP inspections. Should the FDA determine that an inspection is necessary for approval and an inspection cannot be completed during the review cycle due to COVID-19 pandemic restrictions on travel, the FDA has stated that it generally intends to issue a complete response letter. Further, if there is inadequate information to make a determination on the acceptability of a facility, the FDA may defer action on the application until an inspection can be completed. Throughout the pandemic, several companies announced receipt of complete response letters due to the FDA's inability to complete required inspections for their applications. Regulatory authorities outside the U.S. may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic and may experience delays in their regulatory activities. Failure to address any FDA inspection observations in a timely manner, pass

pre-approval inspections or comply with cGMP requirements can result in delays to approvals for future product candidates and/or regulatory action that can limit the ability to manufacture commercial products. As a result, our business, financial condition, and results of operations may be materially harmed.

The manufacture of cell therapy products is characterized by inherent risks and challenges and has proven to be a costly endeavor relative to manufacturing other therapeutic products.

The manufacture of cell therapy products, such as our products and product candidates, is highly complex and is characterized by inherent risks and challenges such as biological raw material inconsistencies, logistical challenges, significant quality control and assurance requirements, manufacturing complexity, and significant manual processing. Unlike products that rely on chemicals for efficacy, such as most pharmaceuticals, cell therapy products are difficult to characterize due to the inherent variability of biological input materials. When manufacturing autologous cell therapies, the number and composition of the cell population varies from patient-to-patient, in part due to the age of the patient, since the therapy is dependent on patient-specific physiology. Such variability in the number and composition of these cells could adversely affect our ability to manufacture autologous cell therapies in a cost-effective manner and meet acceptable product release specifications for use in a clinical trial or, if approved, for commercial sale.

Difficulty in characterizing biological materials or their interactions creates greater risk in the manufacturing process. We attempt to mitigate risks associated with the manufacture of biologics by continuing to improve the characterization of all of our input materials, utilizing multiple vendors for supply of qualified biological materials when possible, and manufacturing some of these materials ourselves. However, there can be no assurance that we will be able to maintain adequate sources of biological materials or that the biological materials that we maintain in inventory will yield finished products that satisfy applicable product release criteria. Our inability to obtain necessary biological materials or to successfully manufacture cell therapy products that incorporate such materials could have a material adverse effect on our results of operations.

There can be no assurance that we or any third-party contractors with whom we enter into strategic relationships will be successful in streamlining manufacturing operations and implementing efficient, low-cost manufacturing capabilities and processes that will enable us to meet and/or maintain the quality, price and production standards or production volumes necessary to achieve our growth and profitability objectives as projected, or at all. Additionally, since the beginning of the COVID-19 pandemic, three vaccines for COVID-19 have received Emergency Use Authorization by the FDA and two of those later received marketing approval. Additional vaccines may be authorized or approved in the future. The recent demand for vaccines designed to protect against COVID-19 infection and the potential for manufacturing facilities and materials to be commandeered under the Defense Production Act of 1950, or equivalent foreign legislation, may make it more difficult to obtain materials or manufacturing supplies for the products needed for our preclinical studies or clinical trials or for our commercial products, which could lead to delays in studies, trials, or our commercial supply.

If any of our manufacturers or suppliers fails to perform its respective obligations, or if our supply of certain components, equipment, disposable devices and other materials is limited or interrupted, ultimately we may be forced to manufacture the materials ourselves, for which we may not have the experience, capabilities or resources. In some cases, the technical skills required to manufacture our products or product candidates may be unique or proprietary to the original manufacturer or supplier, and we may have difficulty, or there may be contractual restrictions prohibiting us from, transferring such skills to a back-up or alternate supplier, or we may be unable to transfer such skills at all.

Risks Related to Our Regulation by the FDA and other Government Entities

Failure to maintain required regulatory approvals would severely limit our ability to sell our products.

We must maintain our domestic regulatory approvals to continue to commercialize our products in the U.S. We must demonstrate the safety, purity and potency, or efficacy, of cell therapy products to obtain FDA regulatory approval prior to marketing in the U.S. Demonstration of safety and efficacy requires the conduct of nonclinical studies and well-controlled clinical trials in compliance with FDA, International Conference of Harmonization (“ICH”) and applicable local regulations. The FDA regulatory review process to obtain marketing approval is a rigorous process that requires demonstrating the ability to manufacture the product in compliance with cGMP in addition to demonstrating a favorable risk/benefit profile and making certain post-marketing commitments.

To date, our product commercialization efforts have been limited to the U.S. In the event we market any products outside of the U.S. in the future, we will be required to maintain our foreign regulatory approvals in compliance with regulatory requirements and applicable local regulations to allow for commercialization outside the U.S. Regulatory requirements outside

the U.S. often require additional studies and data to obtain registration and, as a result, approval timelines can also be longer than those in the U.S.

The safety, potency and purity of our products must be monitored to be in compliance with FDA requirements for safety, cGMP, and all other applicable regulations. This requires adverse event monitoring and reporting to regulatory agencies, as well as submission and approval of any changes in the manufacturing process. Our manufacturing and testing facilities are subject to FDA periodic inspections for compliance with cGMP requirements. Failure to meet regulatory requirements and post-marketing commitments and maintain cGMP compliance could result in severe and detrimental regulatory actions, including the loss of marketing approval.

Any changes in the regulatory requirements that affect our products and/or future product candidates could prevent, limit or delay our ability to market or develop new product candidates.

FDA regulations establish the regulatory requirements for drugs, devices and biological products. Our cell therapy products are regulated as devices or biologics under current regulations. Biologics require BLA approval in the U.S. prior to being marketed. The regulations and guidance that govern the approval of biological products for marketing in the U.S. are subject to review and change by the FDA, and such potential changes could have an adverse impact on our ability to continue to market our products and bring new products to the market.

The price and sale of any of our products may be limited by health insurance coverage and government regulation.

Maintaining and growing sales of our products will depend in large part on the availability of adequate coverage and the extent to which third-party payers, including health insurance companies, health maintenance organizations, and government health administration authorities such as the military, Medicare and Medicaid, private insurance plans and managed care programs will pay for the cost of the products and related treatment. Hospitals and other healthcare provider clients that purchase our products typically bill various third-party payers to cover all or a portion of the costs and fees associated with the procedures in which such products are used, sometimes including the cost of the purchase of these products. See section entitled "*Business - Government Regulation - Pharmaceutical Coverage and Reimbursement*".

Many private payers in the U.S. use coverage decisions and payment amounts determined by the Centers for Medicare & Medicaid Services ("CMS"), as guidelines in setting their coverage and reimbursement policies. While certain procedures using our products are currently covered by Medicare and other third-party payers, future action by CMS or other government agencies, including the imposition of coverage and reimbursement limitations, may diminish payments to physicians, outpatient centers and/or hospitals for covered services. Additionally, payers may require us to conduct post-marketing studies in order to demonstrate the cost-effectiveness of our products and current and future product candidates to such payers' satisfaction. Such studies might require us to commit a significant amount of management time and financial and other resources. Our products and future products might not ultimately be considered cost-effective. As a result, we cannot be certain that the procedures performed with our products will be reimbursed at a cost-effective level or reimbursed at all. Furthermore, the healthcare industry in the U.S. has experienced a trend toward cost containment as government and private insurers seek to control healthcare costs by imposing lower payment rates and negotiating reduced contract rates with service providers. Increasingly, third-party payers have attempted to control costs by challenging the prices charged for medical products. Therefore, we cannot be certain that the procedures performed with our products will be reimbursed at a cost-effective level. Nor can we be certain that third-party payers using a methodology that sets amounts based on the type of procedure performed, such as those utilized in many privately managed care systems and by Medicare, will view the cost of our products as justified so as to incorporate such costs into the overall cost of the procedure.

Moreover, we are unable to predict what changes will be made to the reimbursement methodologies used by third-party payers in the future. As a result of the continuing evaluation and assessment of these expected payments, our estimates for expected payments could change. We cannot be sure that reimbursement will be available for any product that we commercialize and, if reimbursement is available, the level of such reimbursement. Reimbursement may impact the demand for, or the price of, any product or product candidate for which we obtain marketing approval. Adequate third-party reimbursement might not be available to enable us to maintain price levels sufficient to realize an appropriate return on investment in our products and future product development. If coverage or adequate reimbursement is not available, or if our costs of production increase faster than increases in reimbursement levels, we may not be able to successfully grow the sales of our products or commercialize any current and future product candidates for which marketing approval is obtained. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize any product or product candidate for which we obtain marketing approval.

We are subject to significant regulation with respect to the manufacturing of our products. If we are not able to comply with such regulation, our business may be materially harmed.

All of those involved in the preparation of a cellular therapy for commercial sale or clinical trials, including our existing supply contract manufacturers and clinical trial investigators, are subject to extensive and continuing government regulations by the FDA and comparable agencies in other jurisdictions. Components of a finished therapeutic product approved for commercial sale or used in late-stage clinical trials must be manufactured in accordance with cGMP. These regulations govern manufacturing processes and procedures and the implementation and operation of quality systems to control and assure the quality of investigational products and products approved for sale. Our facilities and quality systems and the facilities and quality systems of some or all of our third-party contractors and suppliers are subject to pre-approval and routine FDA inspections for compliance with the applicable regulations as a condition of FDA approval of our products.

Generally, if any FDA inspection or audit identifies a failure to comply with applicable regulations or if a violation of our product specifications or applicable regulation occurs independent of such an inspection or audit, we or the FDA may require remedial measures that may be costly and/or time consuming for us or a third-party to implement and that may include the temporary or permanent suspension of a clinical trial or commercial sales, recalls, warning letters, market withdrawals, seizures or the temporary or permanent closure of a facility. Any such remedial measures imposed upon us or third parties with whom we contract could materially harm our business.

We could incur significant costs complying with environmental and health and safety requirements, or as a result of liability for contamination or other harm caused by hazardous materials that we use.

Our research and development and manufacturing processes involve the use of hazardous materials. We are subject to federal, state, local and foreign environmental requirements, including regulations governing the use, manufacture, handling, storage and disposal of hazardous materials, discharge to air and water, the cleanup of contamination and occupational health and safety matters. We cannot eliminate the risk of contamination or injury resulting from hazardous materials, and we may incur liability as a result of any contamination or injury. Under some environmental laws and regulations, we could also be held responsible for costs relating to any contamination at our past or present facilities and at third-party waste disposal sites where we have sent waste. These could include costs relating to contamination that did not result from any violation of law, and in some circumstances, contamination that we did not cause. We may incur significant expenses in the future relating to any failure to comply with environmental laws. Any such future expenses or liability could have a significant negative impact on our financial condition. The enactment of stricter laws or regulations, the stricter interpretation of existing laws and regulations or the requirement to undertake the investigation or remediation of currently unknown environmental contamination at our own or at a third-party site may require us to make additional expenditures, which could be material.

In order to obtain marketing authorization of any of our current or future therapy product candidates in the U.S., the FDA requires us to submit a BLA or marketing application, which is subject to the agency's detailed review and the denial of such applications could negatively impact our prospects, financial condition and future results.

Cell therapy and other products require FDA review under an appropriate marketing application prior to commercialization. Future cell and other biologic therapy candidates would be subject to FDA's biological product requirements and would require submission of a BLA. The BLA is a request for permission to introduce, or deliver for introduction, a biologic product into interstate commerce in the U.S. and, once submitted, undergoes a detailed and rigorous review by the FDA. The review process includes, among other requirements, pre-approval inspections of the manufacturing facility. Additionally, approval may rely on post-market commitments. These commitments may include costly activities, such as additional clinical trials, and a failure to meet these commitments can result in negative actions by the FDA, including the withdrawal of the product from the market.

Our business, financial condition, results of operation and cash flows could be significantly and negatively affected by substantial governmental regulations.

Our products are subject to rigorous regulation by the FDA and numerous other federal, state and foreign governmental authorities. Overall, there appears to be a trend toward more stringent regulation worldwide, and we do not anticipate that this trend will dissipate in the near future.

In general, the development, testing, labeling, manufacturing and marketing of our products are subject to extensive regulation and review by numerous governmental authorities both in the U.S. and abroad. The regulatory process requires the expenditure of significant time, effort and expense to bring new products to market. For example, the FDA approved Epicel as a HUD pursuant to an HDE application. A HUD is a medical device intended to benefit patients in the treatment or diagnosis of a

disease or condition that affects not more than 8,000 individuals in the U.S. per year. Once a HUD receives a HDE from the FDA, the product may be marketed and sold in the U.S. However, IRB approval is required before a HUD can be used at a facility, with the exception of emergency use. The HDE holder is responsible for ensuring that the product is administered only in facilities having an IRB that is constituted and which acts in accordance with the agency's regulation governing IRBs, including the requirement of continuing review of the use of the device. HUDs are also subject to additional FDA requirements, such as adverse event reporting and the submission of updated information on a periodic basis to demonstrate that the HUD designation is still valid. Failure to meet FDA requirements pertaining to a HUD could result in the suspension or revocation of the HDE.

If the HDE for Epicel is suspended or revoked, marketing approval for the product would require the submission and approval of a PMA in order for Epicel to be commercially available. The PMA process is costly, lengthy and uncertain. A PMA must be supported by extensive data, including, but not limited to, technical, preclinical, clinical trial, manufacturing and labeling data to demonstrate to the FDA's satisfaction the safety and efficacy of the device for its intended use. If the HDE approval for Epicel was withdrawn, and we were unable to obtain premarket approval through the PMA process, we would be unable to market Epicel for sale in the U.S.

We are also required to implement and maintain stringent reporting, labeling and record keeping procedures for our products, both in the U.S., and abroad. Specifically, in the U.S., both before and after a product is commercially released, we have ongoing responsibilities under FDA regulations. Compliance with the FDA's requirements, including the FDA's cGMP recordkeeping regulations, labeling and promotional requirements, adverse event reporting regulations and applicable product tracking and tracing requirements, is subject to continual review and is monitored rigorously through periodic inspections by the FDA and through submission of annual reports. Our failure to comply with federal, state and foreign governmental regulations could lead to the issuance of warning letters or untitled letters, the imposition of injunctions, suspensions or loss of regulatory approvals, product recalls, termination of distribution, product seizures or civil penalties. In the most extreme cases, criminal sanctions or the closure of our manufacturing facility are possible.

In addition, the pharmaceutical, biologic and medical device industries also are subject to many complex laws and regulations governing Medicare and Medicaid reimbursement, and which target healthcare fraud and abuse. Many of these laws and regulations are subject to interpretation. In many instances, manufacturers and the life science industry do not have the benefit of significant regulatory or judicial interpretation of these laws and regulations. In certain public statements, governmental authorities have taken positions on issues for which little official interpretation was previously available. Some of these positions appear to be inconsistent with common practices within the industry but have not previously been challenged.

Various federal and state agencies have become increasingly active in recent years in their investigation and prosecution of various business practices, such as through the enforcement of the federal Anti-kickback Statute, the federal False Claims Act and the FFDCA and/or similar state laws. Governmental and regulatory actions against us could result in various consequences that could adversely impact our operations, including:

- The recall or seizure of products;
- The suspension or revocation of the authority necessary for the production or sale of a product;
- The suspension of shipments from particular manufacturing facilities;
- The imposition of fines and penalties;
- The delay of our ability to introduce new products into the market;
- Our exclusion or the exclusion of our products from being reimbursed by federal and state healthcare programs (such as military, Medicare, Medicaid, Veterans Administration health programs and/or Civilian Health and Medical Program Uniformed Service, or CHAMPUS); and
- Other civil or criminal prosecution or sanctions against us or our officers, directors and employees, such as fines, penalties or imprisonment.

Any of these consequences, in combination or alone, or even a public announcement that we are being investigated for possible violations of these laws, could have a material adverse effect on our business, financial condition, results of operations and cash flows.

In the U.S., if the FDA were to conclude that we are not in compliance with applicable laws or regulations or that any of our products are ineffective or pose an unreasonable health risk, the FDA could ban such products, detain or seize adulterated or misbranded products, order a recall, repair, replacement, or refund of payment of certain products, refuse to grant pending applications, refuse to provide certificates to foreign governments for exports, and/or require us to notify healthcare professionals and others that the products present unreasonable risks of substantial harm to the public health. The FDA may

also impose operating restrictions on a companywide basis, enjoin and restrain certain violations of applicable law pertaining to our products and assess civil or criminal penalties against our officers, employees or us. The FDA may also recommend further investigation and prosecution to the U.S. Department of Justice ("DOJ"). Adverse regulatory action, depending on its magnitude, may restrict us from effectively marketing and selling our products.

In many of the foreign countries in which our products may be marketed in the future, we will be subject to regulations affecting, among other things, clinical efficacy, product standards, packaging requirements, labeling requirements, import/export restrictions, tariff regulations, duties and tax requirements. Many of the regulations applicable to our products in these countries, such as the Medicinal Products Directive and the ATMP guidelines governing products in the EU, are similar to those imposed by the FDA. In addition, in many countries the national health or social security organizations of those nations may require our products to be qualified before they can be marketed with the benefit of reimbursement eligibility. Failure to receive or delays in the receipt of relevant foreign qualifications could also be detrimental to our future growth.

As both U.S. and foreign government regulators have become increasingly stringent, we may be subject to more rigorous regulation by governmental authorities in the future. Our products and our operations are also often subject to the rules of industrial standards bodies, such as the International Standards Organization ("ISO"). If we fail to adequately address any of these regulations, our business will be harmed.

NexoBrid has been designated as an orphan drug in the U.S., but we may be unable to obtain or maintain such a designation or the benefits associated with orphan drug status, including marketing exclusivity, which may cause our revenue to be reduced.

Under the Orphan Drug Act, the FDA may grant orphan designation to drugs or biologics intended to treat a rare disease or condition, generally a disease or condition that affects fewer than 200,000 individuals in the U.S., or affects more than 200,000 individuals in the U.S. and for which there is no reasonable expectation that the cost of developing and making available the drug or biologic in the U.S for such disease or condition will be recovered from sales in the U.S of such drug or biologic. Orphan drug designation must be requested to and granted by the FDA before submitting a BLA. Among the other benefits of orphan drug designation are opportunities for grant funding towards clinical trial costs, tax credits for certain research and a waiver of the BLA application user fee. After the FDA grants orphan drug designation, the generic identity of the biologic and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not necessarily convey any advantage in, or shorten the duration of, the regulatory review and approval process. The first BLA applicant to receive FDA approval for a particular product to treat a particular disease with FDA orphan drug designation is entitled to a seven-year exclusive marketing period in the U.S. for that product, for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market the same drug for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan product to meet the needs of patients with the disease or condition for which the biologic was designated. Orphan drug exclusivity, which would most likely run concurrently with the exclusivity, if any, received from the time of first licensure of a reference product, does not prevent the FDA from approving a different biologic for the same disease or condition, or the same biologic for a different disease or condition.

Such a designation may be revoked by the FDA in certain circumstances, such as if the agency finds that the applicant's request for designation request omitted material information required under the Orphan Drug Act and its implementing regulations. Furthermore, the FDA can waive orphan exclusivity if the applicant is unable to manufacture sufficient supply of the product subject to a period of orphan drug marketing exclusivity.

Changes to our products or future product candidates may require regulatory approvals and a denial of such required approval will negatively impact our prospects, financial condition and future results.

Changes or modifications in the manufacturing process of any of our products may require the submission of supplements to our BLAs, HDE application, and INDs. These supplements require the generation of data to support the change, and the review and approval by the FDA to obtain authorization for the change in the commercial product or in the investigational biological product before they can be implemented. Obtaining regulatory approvals for these changes may require the conduct of new studies and the purchase of new equipment to justify the change. This can be costly and time consuming. Regulatory delays can adversely impact our ability to improve our products and to introduce new products in a timely manner, which can be detrimental to our future growth.

If we or our suppliers fail to comply with ongoing FDA or other foreign regulatory authority requirements, or if we experience unanticipated problems with our products, these products could be subject to restrictions or withdrawal from the market.

The manufacturing processes, reporting requirements, post-approval clinical data and promotional activities for each of our products is subject to continued regulatory reporting and periodic inspections by the FDA, as well as other domestic and foreign regulatory agencies. In particular, we and our suppliers are required to comply with cGMP and GTP regulations for the manufacture of our products and other regulations which include methods and documentation of production controls, labeling, packaging, storage and shipment of any product, to name a few. Regulatory agencies such as the FDA enforce the cGMP, GTP and other regulations through periodic inspections and reporting. For example, the holder of an approved BLA or HDE is obligated to monitor and report adverse events and product failures, including critical deviations and lack of efficacy. A BLA or HDE device holder must maintain regulatory compliance for all aspects of the applicable regulations or the holder can be subject to regulatory action, including the recall or withdrawal of the product from the market.

Product manufacturers are subject to payment of annual prescription drug product program user fees and their facilities are subject to periodic inspections by the FDA and other regulatory agencies for compliance with cGMP and other applicable regulations. If at any time we or a regulatory agency discovers a previously unknown safety concern with a product, such as a serious adverse event of unanticipated severity or frequency that cannot be adequately managed and changes the risk-benefit profile of the product, or there are problems with the facility where the product is manufactured, a regulatory agency may impose restrictions relative to that product or the manufacturing facility, including suspension of manufacturing, recall or the withdrawal of the product from the market.

The failure by us or one of our suppliers to comply with applicable legal statutes and regulations administered by the FDA and other regulatory agencies, or the failure to timely and adequately respond to any adverse inspectional or review observations, or product safety issues, could result in, among other things, any of the following enforcement actions:

- Untitled letters, warning letters, fines, injunctions, consent decrees and civil penalties;
- Unanticipated expenditures to address or defend such actions;
- Client notifications for repair, replacement, or refund of a product;
- Recall, detention or seizure of our products;
- Operating restrictions or partial suspension or total shutdown of production;
- Denial, refusal or delay of our requests for approval of new products or proposed changes to existing products;
- Implementation of operating restrictions;
- Withdrawal of product approvals that have already been granted;
- Refusal to approve a pending marketing application, such as a BLA or supplements to a BLA submitted by us;
- Refusal to grant export approval for our products; or
- Criminal prosecution.

If any of these actions were to occur it would harm our reputation and cause our product sales and profitability to suffer, preventing us from generating revenue. Furthermore, our key suppliers or partners may have compliance issues, which could impact our ability to manufacture our products on a timely basis and in the required quantities.

Inadequate funding for the FDA and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve regulatory submissions and new products can be affected by a variety of factors, including government budget and funding levels, the ability to hire and retain key personnel, and statutory, regulatory, and policy changes. The average time to review and approve regulatory submissions at the agency has fluctuated in recent years as a result of some of these factors. In addition, government funding of the SEC and other government agencies on which our operations may depend, including those that fund research and development activities, is subject to the political process, which is inherently unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for product candidates to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, several times in recent years, including most recently from December 22, 2018 to January 25, 2019, the U.S. government has shut down. As a result, certain regulatory agencies, including the FDA, have had to furlough essential employees and stop critical activities in the past. Additionally, as of May 26, 2021, the FDA noted it is continuing to ensure timely reviews of applications for medical products during the ongoing COVID-19 pandemic in line with its user fee performance goals and conducting mission critical domestic and foreign inspections to ensure compliance of manufacturing facilities with FDA quality standards. However, the FDA may not be able to continue its current pace and approval timelines could be extended, including where a pre-approval facility inspection or an inspection of clinical sites is required and due to the COVID-19 pandemic and travel restrictions, the FDA is unable to complete such required inspections during the review period. Throughout the pandemic, several companies announced receipt of complete response letters due to the FDA's inability to complete required inspections for their applications. If a prolonged government shutdown occurs in the future, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

If the FDA determines that we have marketed or promoted our products for one or more off-label uses, we may be subject to civil or criminal penalties.

Although federal law and the FDA do not restrict practicing healthcare professionals from, in the practice of medicine, prescribing and using our products to treat patients with conditions that the physician believes our products are clinically appropriate for, under the FFDCA and other laws, we are prohibited from promoting our products for uses that are inconsistent with the uses that have been approved by the FDA - also known as "off-label" uses. This means, for example, that we may not make claims about the use of any of our marketed products, including MACI or Epicel, which are outside of their approved labeling and indications. Consequently, our sales representatives may not proactively discuss or provide information to healthcare professionals on such off-label uses. Should the FDA determine that our activities constitute off-label promotion, the FDA could bring an action to prevent us from distributing MACI or Epicel for the off-label use and could impose fines and penalties on us and our executives.

In addition, advertising and promotional materials, including educational and website material, must comply with the FDA's promotional and advertising regulations in addition to other potentially applicable federal and state laws, and such materials for biologics are subject to submission and review by CBER of the FDA. Failure to follow FDA rules and guidelines relating to promotion and advertising can result in, among other things, the FDA's refusal to approve a product, the suspension or withdrawal of an approved product from the market, product recalls, fines, disgorgement of money, operating restrictions, injunctions and/or criminal prosecutions.

If the Office of Inspector General within the Department of Health and Human Services, the DOJ, or another federal or state agency determines that we have promoted the off-label use of our products and/or we have violated anti-kickback laws, we may be subject to various penalties, including civil or criminal penalties, and the off-label use of our products may result in injuries that lead to product liability lawsuits, which could be costly to our business.

In addition to FDA restrictions concerning the manner in which we market our products, several other state and federal healthcare laws have been applied by the DOJ and state attorneys general to restrict certain marketing practices in the biopharmaceutical and medical technology industries. While physicians may prescribe products for off-label uses and indications, a company is prohibited from promoting an approved product for uses not consistent with its approved label. In addition, anti-kickback laws generally prohibit a prescription drug manufacturer from soliciting, offering, receiving or paying any remuneration in order to induce a healthcare professional or another individual or entity to purchase or prescribe a

particular drug, biologic or medical device. If other federal or state regulatory authorities determine that we have engaged in off-label promotion and/or engaged in conduct violative of ant-kickback laws, we may be subject to civil or criminal penalties and could be prohibited from participating in government healthcare programs, such as Medicaid and Medicare. In addition, government agencies or departments could conclude that we have engaged in off-label promotion or violations of anti-kickback laws and, potentially, caused the submission of false claims. Even if we are successful in resolving such matters without incurring penalties, responding to investigations or prosecutions will likely result in substantial costs and could significantly and adversely impact our reputation and divert management's attention and resources, which could have a material adverse effect on our business, operating results, financial condition and our ability to finance our operations. In addition, the off-label use of our products may increase the risk of injury to patients, and, in turn, the risk of product liability claims being pursued against us. Product liability claims are expensive to defend and could divert our management's attention and result in substantial damage awards against us.

Health care reform measures and changes in policies, funding, staffing and leadership at the FDA and other agencies could hinder or prevent the commercial success of our products.

In the U.S., there have been a number of legislative and regulatory changes to the healthcare system that could affect our future results of operations and the future results of operations of our potential customers. See section entitled "*Business — Government Regulation — Healthcare Reform*".

Furthermore, there have been and continue to be a number of initiatives at the federal and state levels that seek to reduce healthcare costs. In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act (jointly, the ACA), which includes measures to significantly change the way health care is financed by both governmental and private insurers.

These laws, and other state and federal healthcare reform measures may be adopted in the future, any of which may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for any of our product candidates for which we may obtain regulatory approval or the frequency with which any such product candidate is prescribed or used. Litigation and legislative efforts to change or repeal the ACA are likely to continue, with unpredictable and uncertain results.

While we cannot predict what impact on federal reimbursement policies this law or any replacement law will have in general or specifically on any product we may commercialize in the future, modifications to the Affordable Care Act or any replacement thereof may result in downward pressure on reimbursement, which could negatively affect market acceptance of new products. Any rebates, discounts, taxes costs or regulatory or systematic changes on healthcare resulting from the Affordable Care Act or its replacement may have a significant effect on our profitability in the future. We cannot predict whether the Affordable Care Act will continue or what other laws or proposals will be made or adopted, or what impact these efforts may have on us.

Individual states have become increasingly aggressive in passing legislation and implementing regulations designed to control product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access, and marketing cost disclosure and transparency measures, and designed to encourage importation from other countries and bulk purchasing. Legally-mandated price controls on payment amounts by third-party payers or other restrictions could harm our business, results of operations, financial condition and prospects.

Regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what products and which suppliers will be included in their healthcare programs. This can reduce demand for our products or put pressure on our product pricing, which could negatively affect our business, results of operations, financial condition and prospects.

Given recent federal and state government initiatives directed at lowering the total cost of healthcare, the executive branch, Congress and state legislatures will likely continue to focus on healthcare reform and the reform of the Medicare and Medicaid programs. For example, on July 9, 2021, President Biden issued an executive order directing the FDA to, among other things, continue to clarify and improve the approval framework for biosimilars, including the standards for interchangeability of biological products, facilitate the development and approval of biosimilar and interchangeable products, clarify existing requirements and procedures related to the review and submission of BLAs, and identify and address any efforts to impede biosimilar competition. While we cannot predict the full outcome of any such government action or legislation, it may harm our ability to market our products and generate revenues.

Furthermore, regulatory authorities' assessment of the data and results required to demonstrate safety and effectiveness can change over time and can be affected by many factors, such as the emergence of new information, including on other products, changing policies and agency funding, staffing and leadership. We cannot be sure whether future changes to the regulatory environment will be favorable or unfavorable to our business prospects.

Our relationships with healthcare providers, physicians, prescribers, purchasers, third-party payors, charitable organizations and patients will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors in the U.S. and elsewhere play a primary role in the recommendation and prescription of biotechnology and biopharmaceutical products. Arrangements with third-party payors and customers can expose biotechnology and biopharmaceutical manufacturers to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute, or AKS, and the federal False Claims Act, or FCA, which may constrain the business or financial arrangements and relationships through which such companies sell, market and distribute biotechnology and biopharmaceutical products. In particular, the research of our product candidates, as well as the promotion, sales and marketing of healthcare items and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Activities subject to these laws also involve the improper use of information obtained in the course of patient recruitment for clinical trials. See the section entitled, "*Business — Government Regulation — Other Healthcare Laws*".

The distribution of biotechnology and biopharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of biotechnology and biopharmaceutical products.

The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. Federal and state 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.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including administrative, civil and criminal penalties, damages, fines, disgorgement, the exclusion from participation in federal and state healthcare programs, individual imprisonment, reputational harm, and the curtailment or restructuring of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws. Further, defending against any such actions can be costly and time consuming, and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment. If any of the above occur, our ability to operate our business and our results of operations could be adversely affected.

Tissue-based products are regulated differently in different countries. These requirements may be costly and result in delay or otherwise preclude the distribution of our products in some foreign countries, any of which would adversely affect our ability to generate operating revenues.

Tissue based products are regulated differently in different countries. Many foreign jurisdictions have a different, and potentially more difficult, regulatory pathway for human tissue-based products, which may prohibit the distribution of these products until the applicable regulatory agencies grant marketing approval, or licensure. The process of obtaining regulatory approval is lengthy, expensive and uncertain, and we may never seek such approvals, or if we do, we may never gain those approvals. Furthermore, any adverse events in our clinical trials could negatively impact our products and product candidates.

Competitor companies may be able to take advantage of additional FDA guidance and new expedited programs designed for cell therapies to develop and/or commercialize new products in a shorter time period than previously predicted or in certain cases without a BLA. If we cannot remain competitive in light of such developments, our business may suffer.

Recognizing the importance of the cell therapy field, Congress included several provisions related to regenerative medicine in the Cures Act, signed into law on December 13, 2016. Building on the FDA's existing expedited programs available to regenerative medicine products, one of these provisions established a new program to help foster the development and approval of these products: the RMAT designation.

On November 16, 2017, the FDA also announced a comprehensive policy framework for the development and oversight of regenerative medicine products, including novel cellular therapies. This framework completes a risk-based regulatory approach that further describes the appropriate pathway for products that contain tissue or cells including more clearly defining which products may be considered only minimally manipulated or for homologous use.

With these changes in guidance and expedited programs, competitors may be able to make sales in the U.S. with minimally manipulated or homologous use products without the necessity of a BLA. In addition, competitors may also be able to obtain accelerated approval of new cell therapy products through use of RMAT designation.

Risks Related to Intellectual Property

If we fail to fulfill our obligations under our intellectual property licenses with third parties, we could lose license rights that are important to our business.

We are a party to intellectual property license agreements with third parties, including our license agreement with MediWound Ltd. for NexoBrid, and we may enter into additional license agreements in the future. Our existing license agreements impose, and we expect that our future license agreements will impose, various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, our licensors may have the right to terminate these agreements, in which event we may not be able to develop and market any product that is covered by these agreements. Termination of these licenses or a reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms. In addition, if these in-licenses are terminated, or if the underlying patents fail to provide the intended exclusivity, competitors would have the freedom to seek regulatory approval of, and to market, products identical to ours after the expiry of data exclusivity. The occurrence of such events could materially harm our business.

If we are unable to protect the confidentiality of our proprietary information and know-how related to our products, our competitive position would be impaired and our business, financial condition and results of operations could be adversely affected.

Some of our technology, including our knowledge regarding the processing of our products, is maintained by us as trade secrets. In an effort to protect these trade secrets, we require our employees, consultants, collaborators and advisors to execute confidentiality agreements upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. These agreements, however, may not provide us with adequate protection against improper use or disclosure of confidential information, and these agreements may be breached. A breach of confidentiality could affect our competitive position. In addition, in some situations, these agreements may conflict with, or be subject to, the rights of third parties with whom our employees, consultants, collaborators or advisors have previous employment or consulting relationships. Also, others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets.

Adequate remedies may not exist in the event of unauthorized use or disclosure of our confidential information. The disclosure of our trade secrets would impair our competitive position and could have a material adverse effect on our business, financial condition and results of operations.

We have no patent protection for Epicel, which could adversely impact Epicel's competitive position.

We have no issued patents or pending patent applications relating to Epicel. While we attempt to protect our proprietary information as trade secrets through certain agreements with our employees, consultants, agents and other organizations to which we disclose our proprietary information, we cannot give any assurance that these agreements will provide effective

protection for our proprietary information in the event of unauthorized use or disclosure of such information. If other cultured epidermal autografts are approved and marketed, we will be unable to prevent them from competing with Epicel in the marketplace. We expect that the presence of one or more competing products would reduce our market share and could negatively impact price levels and third-party reimbursement for Epicel, any of which would materially affect our business.

Some of our issued patents relating to MACI have already expired and others may be insufficient to protect our business.

We have issued patents in the U.S. and in certain foreign countries that relate to the combinations of chondrocytes and collagen membranes used in MACI. However, some of these have expired. Other patent filings that include technology relevant to MACI (e.g., its production and/or use of chondrocytes and collagen membranes) include granted patents inside and outside the U.S., and pending applications inside and outside the U.S.; these granted patents and pending applications, if granted, are expected to expire, absent any extensions, between late-2022 and late-2038. Whether or not these patent filings are or will be issued patents, they may not be sufficient to protect our product revenue. We may be subject to increased competition and our opportunity to establish or maintain product revenue could be substantially reduced or eliminated if our patents fail to issue or expire, or are revoked.

The patents we own may not be of sufficient scope or strength to provide us with significant commercial protection or commercial advantage, and competitors may be able to design around our patents or develop products that provide outcomes that are similar to ours without infringing on our intellectual property rights. In addition, we cannot be certain that patents will be issued from any of our pending patent applications or that the scope of the claims in our pending patent applications will not be significantly narrowed.

If our patents and proprietary rights do not provide substantial protection, then our business and competitive position will suffer.

Our success depends in large part on our ability to develop or license intellectual property rights to protect our proprietary products and technologies. This involves complex legal, scientific, and factual questions and uncertainties. We rely upon patent, trade secret, copyright and contract laws to protect proprietary technology and trademark law to protect brand identities. However, we cannot assure you that any patent applications filed by, assigned to, or licensed to us will lead to patents, and that the scope of any of our issued or licensed patents will be sufficiently broad to offer meaningful protection. In addition, our issued patents or patents licensed to us could be successfully challenged, invalidated, held to be unenforceable, or circumvented so that our patent rights would not create an effective competitive barrier. We also cannot assure you that the inventors of the patents and applications that we own or license were the first to invent or the first to file on the inventions, or that a third-party will not claim ownership in one of our patents or patent applications. We cannot assure you that a third-party does not have or will not obtain patents that dominate the patents we own or license now or in the future.

Patent law relating to the scope of claims in the biotechnology field is evolving and our patent rights in this country and abroad are subject to this uncertainty. From time to time, the Supreme Court, other federal courts, the U.S. Congress or the U.S. Patent and Trademark Office (“USPTO”) may change the standards of patentability and any such changes could have a negative impact on our business.

We cannot assure you that our patent portfolio or our efforts to seek patent protection for our technology and products will not be negatively impacted by the guidance issued by the USPTO, the decisions described above, rulings in other cases, or changes in guidance or procedures issued by the USPTO.

There can be no assurance that future decisions of the Supreme Court or other federal courts will not have a negative impact on biotechnology patents generally or the ability of biotechnology companies to obtain or enforce their patents in the future. Such negative decisions by the Supreme Court or other federal courts could have a material adverse effect on our existing patent portfolio and our ability to protect and enforce our intellectual property in the future.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submissions, 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.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. 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. While an inadvertent 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 current and future product candidates, our competitive position would be adversely affected.

With respect to MACI, if we are unable to obtain and enforce patents and to protect our trade secrets, others could use our technology to compete with us, which could limit opportunities for us to generate revenues by licensing our technology and selling products.

Our success will depend in part on our ability to obtain and enforce patents and maintain trade secrets in the U.S. and in other countries. If we are unsuccessful in obtaining and enforcing patents, our competitors could use our technology and create products that compete with our products, without paying license fees or royalties to us.

The preparation, filing, and prosecution of patent applications can be costly and time consuming. Our limited financial resources may not permit us to pursue patent protection of all of our technology and products throughout the world.

Even if we are able to obtain issued patents covering our technology or products, we may have to incur substantial legal fees and other expenses to enforce our patent rights in order to protect our technology and products from infringing uses. We may not have the financial resources to finance the litigation required to preserve our patent and trade secret rights.

A successful challenge to our trademarks could force us to rebrand Epicel or MACI, which could result in a loss of brand recognition and adversely affect our business.

We rely on our trademarks to distinguish our products from the products of our competitors, and have registered or applied to register a number of these trademarks. Third parties may challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing these new brands.

Intellectual property litigation could harm our business. We may be subject to patent infringement claims that could be costly to defend, which may limit our ability to use disputed technologies, and which could prevent us from pursuing research and development or commercialization of some of our products, require us to pay licensing fees to have freedom to operate and/or result in monetary damages or other liability for us.

The success of our business will depend significantly on our ability to operate without infringing patents and other proprietary rights of others. Our cell processing system and cell compositions utilize a wide variety of technologies and we can give no assurance that we have identified or can identify all inventions and patents that may be infringed by development and manufacture of our cell compositions. If the technology that we use infringes a patent held by others, we could be sued for monetary damages by the patent holder or its licensee, or we could be prevented from continuing research, development, and commercialization of products that rely on that technology, unless we are able to obtain a license to use the patent. The cost and availability of a license to a patent cannot be predicted, and the likelihood of obtaining a license at an acceptable cost would be lower if the patent holder or any of its licensees is using the patent to develop or market a product with which any of our existing or future product candidates or our products would compete. If we could not obtain a necessary license, we would need to develop or obtain rights to alternative technologies, which could prove costly and could cause delays in product development, or we could be forced to discontinue the development or marketing of any products that were developed using the technology covered by the patent.

Although we have not been subject to any filed patent infringement claims, patents could exist or could be filed which would prohibit or limit our ability to market our products or maintain our competitive position. In the event of an intellectual property dispute, we may be forced to litigate. Such litigation is typically protracted and the results are unpredictable. Intellectual property litigation would divert management’s attention from developing our products and would force us to incur substantial costs regardless of whether we are successful. An adverse outcome could subject us to significant liabilities to third parties including treble damages and the opposing party’s attorneys’ fees, and force us to pay significant license fees and royalties or cease the development and sale of our products and processes.

We have hired and expect to continue to hire individuals who have experience in cell culture and cell-based therapeutics and may have confidential trade secret or proprietary information of third parties. We caution these individuals not to use or reveal

this third-party information, but we cannot assure you that these individuals will not use or reveal this third-party information. Thus, we could be sued for misappropriation of proprietary information and trade secrets. Such claims are expensive to defend and could divert our attention and could result in substantial damage awards and injunctions that could have a material adverse effect on our business, financial condition or results of operations.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time consuming and unsuccessful and have a material adverse effect on the success of our business.

Competitors may infringe our patents or misappropriate or otherwise violate our intellectual property rights. To counter infringement or unauthorized use, litigation may be necessary in the future to enforce or defend our intellectual property rights, to protect our trade secrets or to determine the validity and scope of our own intellectual property rights or the proprietary rights of others. Also, third parties may initiate legal proceedings against us to challenge the validity or scope of intellectual property rights we own or control. These proceedings can be expensive and time consuming. Many of our current and potential competitors have the ability to dedicate substantially greater resources to defend their intellectual property rights than we can. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property.

Litigation could result in substantial costs and diversion of management resources, which could harm our business and financial results. In addition, in an infringement proceeding, a court may decide that a patent owned by or licensed to us is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on our business, financial condition or results of operations.

If we infringe the rights of third parties, we could be prevented from selling products, forced to pay damages, and defend against litigation.

If our products, methods, processes and other technologies infringe the proprietary rights of other parties, we could incur substantial costs and we may have to: obtain licenses, which may not be available on commercially reasonable terms, if at all; abandon an infringing product; redesign our products or processes to avoid infringement; stop using the subject matter claimed in the patents held by others; pay damages; and/or defend litigation or administrative proceedings which may be costly whether we win or lose, and which could result in a substantial diversion of our financial and management resources.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage. If we are not able to protect our intellectual property rights, our business may be adversely affected.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business, or permit us to maintain our competitive advantage. The following examples are illustrative:

- Others may be able to make products that are the same as or similar to our products or product candidates, but that are not covered by the claims of the patents that we own or have exclusively licensed;
- We or any strategic partners might not have been the first to make the inventions covered by the issued patents or pending patent applications that we own or have exclusively licensed;
- We might not have been the first to file patent applications covering certain of our inventions;
- Others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- It is possible that our pending patent applications will not lead to issued patents;
- Issued patents that we own or have exclusively licensed may not provide us with any competitive advantages, or may be held invalid or unenforceable as a result of legal challenges;
- Our competitors might conduct research and development activities in the U.S. and other countries that provide a safe harbor from patent infringement claims for certain research and development activities, as well as in countries where

we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- We may not develop additional proprietary technologies that are patentable; and
- The patents of others may have an adverse effect on our business.

Others may challenge our patent or other intellectual property rights or sue us for infringement.

Risks Related to an Investment in our Common Stock

Our common stock price has been volatile and future sales of shares of common stock could have an adverse effect on the market price of such shares.

The market price of shares of our common stock has been volatile, ranging in closing price between $30.93 and $67.81 during January 4, 2021 through January 31, 2022. The price of our common stock may continue to fluctuate in response to a number of events and factors, such as:

- Announcements of research activities, business developments, technological innovations or new products by us or our competitors;
- Entering into or terminating strategic relationships;
- Information related to decisions by regulatory authorities regarding our products or product candidates or other regulatory developments or guidance in both the U.S. and abroad;
- Disputes concerning patents or proprietary rights;
- Changes in our revenues or expense levels;
- Changes in our pricing policies or the pricing policies of our competitors;
- Substantial changes in reimbursement practices;
- The amount of our cash resources and our ability to obtain additional funding;
- Seasonal or other variations in patient demand for MACI and Epicel;
- Demand for and clinical acceptance of our products;
- The timing of sales of products and of the introduction of new products;
- Public concern regarding the safety, efficacy or other aspects of the products or methodologies we are developing;
- Clinical trial results;
- News or reports from other stem cell, cell therapy or regenerative medicine companies;
- Actual or threatened litigation or governmental investigations or other major developments in such matters;
- Reports by securities analysts;
- Status and condition of the investment markets;
- Public or private sales of additional securities;
- Cybersecurity incidents that materially affect our products, services, relationships or competitive conditions;
- Loss of key personnel;
- The impact of the ongoing COVID-19 pandemic on our business, operations, prospects and financial condition;
- Changes in management or the Board of Directors; and
- Concerns related to management transitions.

Any of these events may cause the price of our shares to fall, which may adversely affect our business and financing opportunities. In addition, the stock market in general and the market prices for biotechnology companies in particular have experienced significant volatility recently that often has been unrelated to the operating performance or financial conditions of such companies. These broad market and industry fluctuations may adversely affect the trading price of our common stock, regardless of our operating performance or prospects.

The sale of our common stock through future equity offerings may cause dilution and could cause the price of our common stock to decline.

Sales of our common stock offered through future equity offerings may result in substantial dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock to investors, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

On August 27, 2021, we entered into a Sales Agreement with SVB Leerink LLC, as sales agent (“SVB Leerink”), pursuant to which we may offer and sell up to $200.0 million of shares of our common stock, no par value per share (“ATM Shares”).

The ATM Shares to be offered and sold under the Sales Agreement will be issued and sold pursuant to an automatically effective shelf registration statement on Form S-3ASR (File No. 333-259119) filed by the Company on August 27, 2021, which expires within three years from the filing date. We also filed a prospectus supplement relating to the offering and sale of the ATM Shares on August 27, 2021. Vericel is not obligated to make any sales of ATM Shares, and SVB Leerink is not required to sell any specific number or dollar amount of the ATM Shares under the Sales Agreement. We capitalize certain legal, professional accounting and other third-party fees that are directly associated with in-process stock financings as deferred offering costs until such financings are consummated. As of the date of issuance of these financial statements, Vericel has sold no shares pursuant to the Sales Agreement.

We do not anticipate paying dividends on our common stock, and accordingly, shareholders must rely on stock appreciation for any return on their investment.

We have never declared or paid cash dividends on our common stock and do not expect to do so in the foreseeable future. The declaration of dividends is subject to the discretion of our board of directors and will depend on various factors, including our operating results, financial condition, future prospects and any other factors deemed relevant by our board of directors. You should not rely on an investment in our company if you require dividend income from your investment. The success of your investment will likely depend entirely upon any future appreciation of the market price of our common stock, which is uncertain and unpredictable. There is no guarantee that our common stock will appreciate in value.

General Risks

The use of our products and future product candidates may expose us to product liability claims, and we may not be able to obtain adequate insurance. As a result, such claims could affect our earnings and financial condition.

We face an inherent business risk of exposure to product liability claims in the event that the manufacture and/or use of our products during clinical trials, or after commercialization, result in adverse events. Moreover, we derive the raw materials for our products from patients serving as their own donors, the production process is complex, and the handling requirements are specific. All of these factors increase the likelihood of quality failures and subsequent product liability claims. Although we are not currently subject to any product liability proceedings and we have no reserves for product liability disbursements, we may incur material liabilities relating to product liability claims in the future, including product liability claims arising out of the usage of our products. Additionally, we may not be able to obtain or maintain product liability insurance on acceptable terms with adequate coverage or at all. If we are unable to obtain insurance, or if claims against us substantially exceed our coverage, then our business could be adversely impacted. Excessive insurance costs or uninsured claims would increase our operating loss and adversely affect our financial condition. Whether or not we are ultimately successful in any product liability litigation, such litigation could consume substantial amounts of our financial and managerial resources and could result in, among other things:

- Significant awards against us;
- Substantial litigation costs;
- Recall of the product;
- Injury to our reputation;
- Withdrawal of clinical trial participants; or
- Adverse regulatory action.

Any of these consequences could have a material adverse effect on our business, financial condition and results of operations.

We may not be able to raise the required capital to develop and commercialize our future product candidates and otherwise grow and expand our business.

Notwithstanding the net proceeds we received from previous public offerings, we may require substantial additional capital resources for strategic opportunities.

In order to grow and expand our business, to introduce other new product candidates into the marketplace, we may need to raise additional funds. We may also need significant additional funds or a collaborative partner, or both, to finance the research and development activities of future cell therapy product candidates for additional indications or in additional markets.

Our future capital requirements will depend upon many factors, including:

- Continued scientific progress in our research, clinical and development programs;
- Costs and timing of conducting clinical trials and seeking regulatory approvals;
- Competing technological and market developments;
- Avoiding infringement and misappropriation of third-party intellectual property;
- Obtaining valid and enforceable patents that give us a competitive advantage;
- Our ability to establish additional collaborative relationships;
- Our ability to scale up our production capabilities for larger quantities of our products;
- The effect of commercialization activities and facility improvements and expansions, if and as required; and
- Complementary business acquisitions or development opportunities.

We may try to access the public or private equity markets if conditions are favorable to complete a financing, even if we do not have an immediate need for additional capital at that time, or whenever we require additional operating capital. In addition, we may seek collaborative relationships, incur debt and access other available funding sources. This additional funding may not be available to us on reasonable terms, or at all. Some of the factors that will impact our ability to raise additional capital and our overall success include:

- Our ability to further commercialize our products;
- The rate and degree of progress of our product development;
- The rate of regulatory approval to proceed with clinical developmental programs;
- The level of success achieved in clinical trials;
- The requirements necessary for marketing authorization from regulatory bodies in the U.S. and other countries;
- The liquidity and market volatility of our equity securities; and
- Regulatory and manufacturing requirements and uncertainties, and technological developments by competitors.

If adequate funds are not available in the future, we may not be able to develop or enhance our products, take advantage of future opportunities, or respond to competitive pressures or unanticipated requirements and we may be required to delay or terminate research and development programs, curtail capital expenditures, and reduce business development and other operating activities, which would have a material adverse impact on our business, financial condition and results of operations.

The current credit and financial market conditions may exacerbate certain risks affecting our business.

We rely upon third parties for certain aspects of our business, including collaboration partners, wholesale distributors, contract clinical trial providers, contract manufacturers and third-party suppliers. Because of the recent tightening of global credit and the volatility in the financial markets, there may be a delay or disruption in the performance or satisfaction of commitments to us by these third parties, which could adversely affect our business.

We are dependent on our key manufacturing, quality and other management personnel and the loss of any of these individuals could harm our business.

Our success depends in large part upon the efforts of our key management and manufacturing and quality staff. The loss of any of these individuals, or our inability to attract and retain highly qualified scientific and management personnel in a timely manner, could materially and adversely affect our business and our future prospects. In the future, we may need to seek additional manufacturing and quality staff members. There is a high demand for highly trained manufacturing and quality personnel in our industry. We face competition for such personnel from other companies, research and academic institutions and other entities. For example, multiple companies with operations in Massachusetts have developed or are continuing to develop vaccines and/or treatments for COVID-19. In some instances, these companies are undertaking large-scale manufacturing operations in order to potentially supply their products throughout the U.S. and internationally. In many instances, these companies have advertised hundreds of open manufacturing positions to support these scale-ups. Although, to date, we have not experienced a significant number of departures among our manufacturing staff, we cannot be sure such departures will not occur in the future. We do not know whether we will be able to attract, train and retain highly qualified manufacturing and quality personnel in the future, which could have a material adverse effect on our business, financial condition and results of operations. A loss of one or more of our key personnel could severely and negatively impact our operations. Our key personnel are employed “at-will,” and any of them may elect to pursue other opportunities at any time. We have no present intention of obtaining key man life insurance on any of our key management, manufacturing, quality or other personnel.

Efforts to comply with securities laws and regulations require management resources, and we still may fail to comply. If we are not able to comply with such laws and regulations, there may be a material adverse impact on our business, financial conditions and results of operations.

As directed by Section 404 of the Sarbanes-Oxley Act of 2002, the SEC adopted rules requiring public companies to include a report of management on their internal controls over financial reporting in their annual reports on Form 10-K. The independent registered public accounting firm auditing our consolidated financial statements is required to attest to the effectiveness of our internal controls over financial reporting. If, in any year, we are unable to conclude that we have effective internal controls over financial reporting or if our independent registered public accounting firm is required to, but is unable to provide us with a report as to the effectiveness of our internal controls over financial reporting, investors could lose confidence in the reliability of our consolidated financial statements, which could result in a decrease in the value of our securities.

Our corporate documents and Michigan law contain provisions that may make it more difficult for us to be acquired.

Our Board of Directors has the authority, without shareholder approval, to issue additional shares of preferred stock and to fix the rights, preferences, privileges and restrictions of these shares without any further vote or action by our shareholders. Michigan law contains a statute that makes it more difficult for a 10% shareholder, or its officers, to acquire a company. This authority, together with certain provisions of our charter documents, may have the effect of making it more difficult for a third-party to acquire, or of discouraging a third-party from attempting to acquire, control of our company. This effect could occur even if our shareholders consider the change in control to be in their best interest.

Changes to tax legislation and regulations could negatively impact our earnings.

We are subject to income taxes in the U.S. In particular, although the passage of the Tax Cuts and Jobs Act of 2017 reduced the U.S. tax rate to 21 percent the law is complex and further regulations and interpretations are still being issued. We could face audit challenges on how we apply the new law that could have a negative impact on our provision for income taxes. In addition, particularly in light of the Biden Administration, our future earnings could be negatively impacted by changes in tax legislation, including a repeal or modification of the Tax Cuts and Jobs Act of 2017, changes in tax rates and tax base such as limiting, phasing-out or eliminating deductions or tax credits, increase taxing of certain excess income from intellectual property, revising tax law interpretations and changes in other tax laws in the U.S.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

We lease approximately 57,000 square feet in Cambridge, Massachusetts for manufacturing operations including clean rooms, laboratories and office space. This Cambridge lease expires in February 2032 and we have the right to extend until February 2037, subject to certain conditions being met. We lease approximately 14,000 square feet of additional office space in Cambridge, Massachusetts expiring in 2024 and we have the right to extend until 2029. We also lease approximately 6,000 square feet of office space in Ann Arbor, Michigan, which expires in April 2023. We believe that our facilities are adequate to meet our current needs. Additional facilities will be required to support expansion of our manufacturing operations and research and development activities. On January 28, 2022, we entered into a new lease for approximately 126,000 square feet of to-be-constructed manufacturing, laboratory and office space in Burlington, Massachusetts, which will serve as our new corporate headquarters and primary manufacturing facility. See Note 15, “Subsequent Events” in our accompanying consolidated financial statements for further information.

Item 3. ***Legal Proceedings***

We are currently not party to any material legal proceedings, although from time-to-time we may become involved in disputes in connection with the operation of our business.

Item 4. ***Mine Safety Disclosures***

Not applicable.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchase of Equity Securities***

Market Information

Our common stock is currently trading on the NASDAQ Stock Market under the symbol "VCEL".

Holders of Record

As of January 31, 2022 there were approximately 169 holders of record of our common stock.

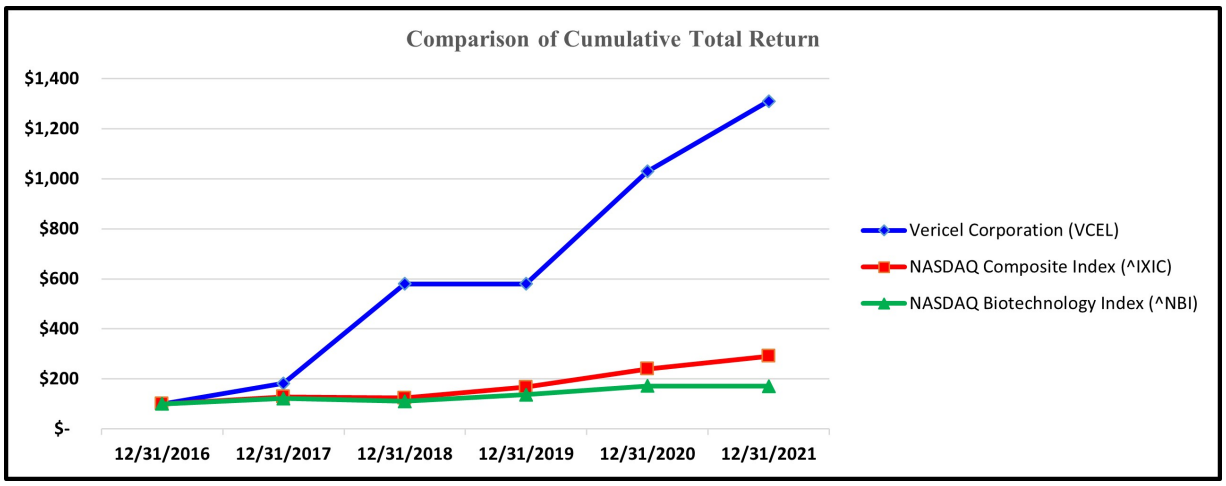
Dividends

We have never paid cash dividends on our common stock and we do not anticipate paying such cash dividends in the foreseeable future. We currently anticipate that we will retain all future earnings, if any, for use in the development of our business.

Stock Performance Graph

The performance graph set forth below shall not be deemed "soliciting material" or to be "filed" with the SEC. This graph will not be deemed "incorporated by reference" into any filing under the Securities Act or the Exchange Act, whether such filing occurs before or after the date hereof, except to the extent that the Company explicitly incorporates it by reference into in such filing.

Set forth below is a line graph comparing the cumulative total shareholder return on Vericel's common stock with the cumulative total return of (i) the NASDAQ Composite Index, and (ii) the NASDAQ Biotechnology Index, for the period from December 31, 2016 through December 31, 2021. The comparison assumes that a hypothetical $100 was invested on December 31, 2016 in our common stock and in both of the foregoing indices. All values assume reinvestment of the pre-tax value of dividends paid by companies included in these indices. The historical stock price performance of our common stock shown in the graph below is not necessarily indicative of future stock price performance, and we do not make or endorse any predictions as to future stockholder returns.



	12/31/16	12/31/17	12/31/18	12/31/19	12/31/20	12/31/21
Vericel Corporation (VCEL)	$100	$182	$580	$580	$1,029	$1,310
NASDAQ Composite Index (^IXIC)	$100	$128	$123	$167	$239	$291
NASDAQ Biotechnology Index (^NBI)	$100	$121	$110	$137	$172	$171

Purchases of Equity Securities by the Issuer

There were no repurchases of shares of common stock made during the year ended December 31, 2021.

Item 6. ***Reserved***

Not applicable.

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

Safe Harbor Statement under The Private Securities Litigation Reform Act of 1995

Our reports, filings and other public announcements contain certain statements that describe our management's beliefs concerning future business conditions, plans and prospects, growth opportunities and the outlook for our business and the biopharmaceutical industry based upon information currently available. Such statements are "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995. Wherever possible, we have identified these forward-looking statements by words such as "will," "may," "anticipates," "believes," "intends," "estimates," "expects," "plans," "projects," "trends," "opportunity," "current," "intention," "position," "assume," "potential," "outlook," "remain," "continue," "maintain," "sustain," "seek," "target," "achieve," "continuing," "ongoing," and similar words or phrases, or future or conditional verbs such as "would," "should," "could," "may," or similar expressions. These forward-looking statements are based upon assumptions our management believes are reasonable. Such forward-looking statements are subject to risks and uncertainties which could cause our actual results, performance and achievements to differ materially from those expressed in, or implied by, these statements, including, among others, the risks and uncertainties listed in this report under "Item 1A Risk Factors" and in our other reports filed with the SEC from time-to-time.

Because our forward-looking statements are based on estimates and assumptions that are subject to significant business, economic and competitive uncertainties, many of which are beyond our control or are subject to change, actual results could be materially different and any or all of our forward-looking statements may turn out to be wrong. Forward-looking statements speak only as of the date made and can be affected by assumptions we might make or by known or unknown risks and uncertainties. Many factors mentioned in our discussion in this report will be important in determining future results. New factors emerge from time-to-time, and it is not possible for us to predict which factors will arise. Consequently, we cannot assure you that our expectations or forecasts expressed in such forward-looking statements will be achieved. Except as required by law, we undertake no obligation to publicly update any of our forward-looking or other statements, whether as a result of new information, future events, or otherwise.

Overview

Vericel Corporation is a fully-integrated, commercial-stage biopharmaceutical company and is a leader in advanced therapies for sports medicine and severe burn care markets. We currently market two FDA-approved autologous cell therapy products in the U.S. MACI® is an autologous cellularized scaffold product indicated for the repair of symptomatic, single or multiple full-thickness cartilage defects of the knee with or without bone involvement in adults. Epicel® is a permanent skin replacement HUD for the treatment of adult and pediatric patients with deep-dermal or full-thickness burns comprising greater than or equal to 30 percent of TBSA. We also hold an exclusive license from MediWound for North American rights to NexoBrid®, a registration-stage biological orphan product for the debridement of severe thermal burns. In 2020, MediWound submitted to the FDA a BLA seeking the approval of NexoBrid for eschar removal (debridement) in adults with deep partial-thickness and/or full-thickness thermal burns. The FDA accepted the BLA for filing and assigned a PDUFA target date of June 29, 2021. Thereafter, on June 29, 2021, MediWound received a complete response letter from the FDA regarding the BLA through which the FDA communicated to MediWound that it had completed its review of the BLA, as amended, and had determined that it could not approve the BLA in its present form. We continue to work with MediWound, BARDA and the FDA to address the issues identified by the FDA, to prepare and submit a BLA resubmission to the FDA, and to seek the potential approval of NexoBrid.

See "Risk Factors - NexoBrid's approval in the U.S. for the treatment of severe burns may be further delayed, or it may not be approved for use in the U.S. and other North American markets at all."

COVID-19

The ongoing pandemic caused by the spread of a novel strain of coronavirus (COVID-19) has created significant disruptions to the U.S. and global economy and has contributed to significant volatility in financial markets. The global impact of the pandemic has fluctuated since early 2020. At times, many state, local and national governments – including those in Massachusetts and Michigan, where our operations are located – have responded by issuing, extending and supplementing orders requiring quarantines, restrictions on travel, and the mandatory closure of certain non-essential businesses, among other actions. In the U.S., the status and application of these orders have varied on a state-by-state basis since the early days of the pandemic. Many of the restrictions have been periodically updated as infection rates in the U.S. have risen and fallen, as new virus variants have emerged, as vaccines have been distributed and administered, and as world health leaders learn more about

the virus, its transmission pathway and who is most at risk. Because Vericel is deemed an essential business, we were exempted from government orders requiring the closure of workplaces and the cessation of business operations.

Notwithstanding being an essential business, our business and operations at times have been adversely impacted by the ongoing effects of the COVID-19 pandemic. For example, as a result of periodic restrictions placed on the performance of elective surgical procedures, Vericel experienced a significant increase in cancellations of scheduled MACI procedures, as well as a slowdown in new MACI orders during March and April of 2020. The widespread suspension of surgical procedures impacted our business and operations during the first and second quarters of 2020. The level and degree of restriction on elective surgeries, on the ability of patients to seek treatment and on U.S. business operations generally fluctuated throughout 2020 as COVID-19 infection rates rose and fell during the summer months and into the autumn. By the first quarter of 2021, the pandemic's effects on our MACI business had largely dissipated. During the summer of 2021, however, the pandemic's direct and ancillary effects again began to cause some disruption to our MACI business. Following the cessation of COVID-19-related travel restrictions in many parts of the U.S. and the availability of vaccinations in May and June 2021, some MACI patients postponed or delayed treatment – opting instead to take vacation and/or travel. Further, surges of new COVID-19 cases during the second half of 2021 caused by the spread of the "Delta" and "Omicron" variants again caused disruptions to health care networks including restrictions on the performance of elective surgical procedures, the availability of physicians and/or their treatment prioritizations, the level of healthcare facility staffing and, in some instances, the willingness or ability of patients to seek treatment. Consequently, and notwithstanding the widespread distribution of vaccines, these factors contributed to a slowdown of MACI procedures during the third and fourth quarters of 2021. Although hospitals are now better prepared for subsequent surges in COVID-19 patients, the risk remains that regional or local restrictions could again be placed on the performance of elective surgical procedures if the number of COVID-19 infections in the U.S. were to continue to rise, or if new or existing COVID-19 variants render current vaccine treatments ineffective.

Because Epicel is used almost exclusively in an emergent setting by burn centers and surgeons throughout the country, Epicel revenue and procedure volumes have been less affected by the pandemic. Nevertheless, large burns and burn admissions can be affected by restrictions on human activity resulting from more severe government lockdown orders.

At the outset of the pandemic, we put in place a comprehensive workplace protection plan, which instituted protective measures in response to COVID-19. Our workplace protection plan has closely followed guidance issued by the Centers for Disease Control and Prevention ("CDC") and has complied with applicable federal and state law. To date, Vericel has been successful in sustaining its operations and providing MACI and Epicel to patients in need. We continue to review our policies and procedures regularly, including our workplace protection plan, as the pandemic evolves and we may take additional actions to the extent required.

We continue to manufacture MACI and Epicel and we are maintaining a significant safety stock of all key raw materials. We do not expect current supply chain interruptions will impact our ongoing manufacturing operations. With respect to customer delivery, MACI final product has an established shelf life of six (6) days and established shipping shelf life of three (3) days. Currently, MACI is picked up by courier and shipped by commercial air or ground transportation to customer surgical sites. Epicel final product has an established shelf life of 48 hours and is hand carried to customer hospitals by courier. Transportation is primarily by commercial or charter airline. Although we have not experienced material shipping delays or materially increased costs to date, significant disruption of air travel could result in the inability to deliver MACI or Epicel final products to customer sites within appropriate timeframes, which could further adversely impact our business. At this time, we are not aware of COVID-19-related impacts on our distributors, operations or third-party service providers' ability to manage patient cases.

We believe it is possible that we could continue to experience variable impacts on our business, should the current resurgence of COVID-19 in various areas of the U.S. continue for an extended period, or should a new resurgence occur in the future. Measures taken to limit the impact of COVID-19 at the international, national and local levels, including the availability and effectiveness of COVID-19 vaccines, shelter-in-place orders, social distancing measures, travel bans and restrictions, and business and government shutdowns, may again create significant negative economic impacts on a global basis. Given that uncertainty, we cannot reliably estimate the extent to which the ongoing COVID-19 pandemic may continue to impact utilization and revenue of our products in 2022 and beyond.

For a discussion of additional risks associated with the ongoing COVID-19 pandemic, please see Part I, Item 1A. "Risk Factors".

Manufacturing

We have a cell-manufacturing facility in Cambridge, Massachusetts which is used for U.S. manufacturing and distribution of MACI and Epicel.

Product Portfolio

Our marketed products include two FDA-approved autologous cell therapies: MACI, a third-generation autologous cellularized scaffold product indicated for the repair of symptomatic, single or multiple full-thickness cartilage defects of the knee with or without bone involvement in adults and Epicel, a permanent skin replacement for the treatment of adult and pediatric patients with deep-dermal or full-thickness burns comprising greater than or equal to 30 percent of TBSA. Both products are currently marketed in the U.S. In addition, we have entered into exclusive license and supply agreements with MediWound to commercialize NexoBrid in North America, if approved. As previously mentioned, MediWound has submitted a BLA to the FDA, seeking commercial approval of NexoBrid. On June 29, 2021, we announced that MediWound had received a complete response letter from the FDA regarding the BLA, through which the FDA communicated to MediWound that it had completed its review of the BLA, as amended, and had determined that it could not approve the BLA in its present form. We continue to work with MediWound, BARDA and the FDA to address the issues identified by the FDA, to prepare and submit a BLA resubmission to the FDA, and to seek the potential approval of NexoBrid.

MACI

MACI is a third-generation ACI product indicated for the repair of symptomatic, single or multiple full-thickness cartilage defects of the knee with or without bone involvement in adults.

Our target audience of U.S. physicians is approximately 5,000 orthopedic surgeons and is divided into two segments: a group of orthopedic surgeons who self-identify and/or have a formal specialty as sports medicine physicians, and a subpopulation of general orthopedic surgeons who perform a high volume of cartilage repair procedures. As of the date of this report, we have 76 MACI sales representatives to enable the sales force to reach our target audience. Most private payers have a medical policy that covers treatment with MACI with the top 30 largest commercial payers having a formal medical policy for MACI or ACI in general. With respect to private commercial payers that have not yet approved a medical policy for MACI, we often obtain approval on a case-by-case basis for medically appropriate cases.

Epicel

Epicel is a permanent skin replacement for deep-dermal or full-thickness burns greater than or equal to 30 percent of TBSA. Epicel is regulated by CBER of the FDA under medical device authorities, and is the only FDA-approved cultured epidermal autograft product available for large total surface area burns. Epicel was designated as a HUD in 1998 and an HDE application for the product was submitted in 1999. HUDs are devices that are intended for diseases or conditions that affect fewer than 8,000 individuals annually in the U.S. Under an HDE approval, a HUD cannot be sold for an amount that exceeds the cost of research and development, fabrication and distribution unless certain conditions are met. A HUD is eligible to be sold for profit after receiving HDE approval if the device meets certain eligibility criteria, including where the device is intended for the treatment of a disease or condition that occurs in pediatric patients and such device is labeled for use in pediatric patients. If the FDA determines that a HUD meets the eligibility criteria, the HUD is permitted to be sold for profit so long as the number of devices distributed in any calendar year does not exceed the Annual Distribution Number (“ADN”). The ADN is defined as the number of devices reasonably needed to treat a population of 8,000 individuals per year in the U.S.

On February 18, 2016, the FDA approved our HDE supplement to revise the labeled indications of use for Epicel to specifically include pediatric patients. The revised product label also now specifies that the probable benefit of Epicel, mainly related to survival, was demonstrated in two Epicel clinical experience databases and a physician-sponsored study comparing outcomes in patients with massive burns treated with Epicel relative to standard care. Because of the change in the label to specifically include use in pediatric patients, Epicel is no longer subject to the HDE profit restrictions. In conjunction with adding the pediatric labeling and meeting the pediatric eligibility criteria, the FDA has determined the ADN number for Epicel to be 360,400 which is approximately 30 times larger than the volume of grafts sold in 2021. We currently have a thirteen-person burn field force comprised of seven account managers and six burn clinical specialists, led by a regional and a national sales director.

NexoBrid

Our development portfolio includes NexoBrid, a registration-stage, topically-administered biological product that enzymatically removes nonviable burn tissue, or eschar, in patients with deep partial and full-thickness thermal burns. We have entered into exclusive license and supply agreements with MediWound to commercialize NexoBrid and any improvements to the product in North America, if approved. On September 16, 2020, we announced the acceptance of MediWound's submission of a BLA for review by the FDA to seek marketing approval for NexoBrid in the U.S. for the treatment of severe burns, and the FDA's assignment of a Prescription Drug User Fee Act ("PDUFA") target date for the product of June 29, 2021. Subsequently, on June 29, 2021, we announced that MediWound had received a complete response letter from the FDA regarding the BLA, through which the FDA communicated to MediWound that it had completed its review of the BLA, as amended, and had determined that it could not approve the BLA in its present form. We continue to work with MediWound, BARDA and the FDA to address the issues identified in the agency's complete response letter, to prepare and submit a BLA resubmission to the FDA and to seek the potential approval of NexoBrid. See also "Risk Factors - NexoBrid's approval in the U.S. for the treatment of severe burns may be further delayed, or it may not be approved for use in the U.S. and other North American markets at all."

NexoBrid is approved in the EU and other international markets and has been designated as an orphan biologic in the U.S., EU and other international markets. Pursuant to the terms of our existing license agreement, if the BLA is approved, MediWound will transfer the BLA to us and we will market NexoBrid in the U.S. Both MediWound and Vericel, under the supervision of a Central Steering Committee comprised of members of both companies will continue to guide development of NexoBrid in North America. Under our license agreement with MediWound, NexoBrid is being manufactured for BARDA prior to approval by the FDA under an emergency use authorization.

Results of Operations

The following is a summary of our consolidated results of operations:

	Year Ended December 31,			2021 vs. 2020	
(In thousands)	**2021**	**2020**	**2019**	**Change $**	**Change %**
Total revenue	$ 156,184	$ 124,179	$ 117,850	$ 32,005	25.8 %
Cost of product sales	50,159	39,951	37,571	10,208	25.6 %
Gross profit	106,025	84,228	80,279	21,797	25.9 %
Research and development	16,287	13,020	30,391	3,267	25.1 %
Selling, general and administrative	97,592	68,836	61,139	28,756	41.8 %
Total operating expenses	113,879	81,856	91,530	32,023	39.1 %
(Loss) income from operations	(7,854)	2,372	(11,251)	(10,226)	(431.1)%
Total other income (expense)	272	672	1,586	(400)	(59.5)%
Income tax (benefit) expense	(111)	180	—	(291)	(161.7)%
Net (loss) income	$ (7,471)	$ 2,864	$ (9,665)	$ (10,335)	(360.9)%

Comparison of the Periods Ended December 31, 2021 and 2020

Total Revenue

Revenue by product for the years ended December 31, 2021, 2020 and 2019 are as follows:

	Year Ended December 31,			2021 vs. 2020	
(In thousands)	**2021**	**2020**	**2019**	**Change $**	**Change %**
MACI	$ 111,554	$ 94,432	$ 91,620	$ 17,122	18.1 %
Epicel	41,521	27,536	26,230	13,985	50.8 %
NexoBrid	3,109	2,211	—	898	40.6 %
Total Revenue	$ 156,184	$ 124,179	$ 117,850	$ 32,005	25.8 %

Total revenue increase for the year ended December 31, 2021, compared to 2020, was driven primarily by volume growth for both MACI and Epicel, in addition to $3.1 million, of revenue recognized related to the delivery of NexoBrid to BARDA for emergency response preparedness, compared to $2.2 million in the prior year.

Seasonality. The effects of the ongoing COVID-19 pandemic have disrupted the normal seasonality of our MACI business at times over the past twenty-two months. These effects have included, among others, periodic restrictions on the performance of elective surgical procedures throughout the country, the unavailability of physicians and/or changes to their treatment prioritizations, reductions in the levels of healthcare facility staffing and, in certain instances, the willingness or ability of patients to seek treatment and the inability of our Clinical Account Specialists to call on surgeon customers. Over the last five years, ACI (MACI and Carticel prior to its replacement) sales volumes from the first through the fourth quarter on average represented 19% (16%-21% range), 22% (16%-25% range), 23% (21%-26% range) and 36% (33%-38% range) respectively, of total annual volumes. MACI orders are normally stronger in the fourth quarter due to several factors including the satisfaction by patients of insurance deductible limits and the time of year patients prefer to start rehabilitation. Because of the effects of the COVID-19 pandemic, the MACI business seasonality in 2021 and 2020 did not follow our historical patterns, and seasonality in 2022 could continue to be impacted by COVID-19 related factors, as well - such as patient behavior and vacations and the spread of the COVID-19 “Delta” and “Omicron” variants. Due to the low incidence and variable occurrence of severe burns, Epicel revenue has inherent variability from quarter-to-quarter and does not exhibit significant seasonality.

Gross Profit

Gross profit increased for the year ended December 31, 2021, primarily due to continued growth of both products, the impacts of the COVID-19 pandemic in the prior year, and increased units of procured NexoBrid to BARDA that led to higher revenue related to NexoBrid, compared to 2020.

Research and Development Expenses

The following table summarizes research and development expenses, which include license fees, materials, professional fees and an allocation of employee-related salary and fringe benefit costs for our research and development projects:

	Year Ended December 31,			2021 vs. 2020	
(In thousands)	**2021**	**2020**	**2019**	**Change $**	**Change %**
MACI	$ 9,170	$ 7,157	$ 8,088	$ 2,013	28.1 %
Epicel	4,061	3,257	3,538	804	24.7 %
NexoBrid	3,056	2,606	18,765	450	17.3 %
Total research and development expenses	$ 16,287	$ 13,020	$ 30,391	$ 3,267	25.1 %

Research and development expenses for the year ended December 31, 2021 were $16.3 million, compared to $13.0 million for 2020. The increase is primarily due to an increase of $2.2 million in stock-based compensation expense.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the year ended December 31, 2021 were $97.6 million, compared to $68.9 million for 2020. The increase in selling, general and administrative expenses during the year ended December 31, 2021, compared to 2020, is primarily due to a $16.5 million increase in stock-based compensation expenses, a $2.6 million increase as a result of additional headcount, a $2.3 million increase in marketing activities, and a $1.9 million increase in patient reimbursement support services as a result of higher MACI sales volume.

Total Other Income (Expense)

The change in total other income (expense) for the year ended December 31, 2021, was primarily due to the decreasing rates of return on our investments in various marketable debt securities.

Tax Benefit

For the year-ended December 31, 2021, we recorded a state income tax benefit of $0.1 million, as a result of a return to provision adjustment.

Stock-based Compensation Expense

Non-cash stock-based compensation expense is summarized in the following table:

	Year Ended December 31,			2021 vs. 2020	
(In thousands)	2021	2020	2019	Change $	Change %
Cost of product sales	$ 3,681	$ 1,949	$ 2,029	$ 1,732	88.9 %
Research and development	4,120	1,884	2,428	2,236	118.7 %
Selling, general and administrative	26,521	10,010	8,722	16,511	164.9 %
Total non-cash stock-based compensation expense	$ 34,322	$ 13,843	$ 13,179	$ 20,479	147.9 %

The increase in stock-based compensation expense for the year ended December 31, 2021, is due primarily to fluctuations in stock prices which impacts the fair value of the options and restricted stock units awarded and the expense recognized in the period.

Comparison of the Periods Ended December 31, 2020 and 2019

For a comparison of our results of operations for the fiscal years ended December 31, 2020 and December 31, 2019, see “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 fiscal year ended December 31, 2020, filed with the SEC on February 24, 2021.

Liquidity and Capital Resources

Since our acquisition of MACI and Epicel in 2014, our primary focus has been to invest in our existing commercial business with the goal of growing revenue. We have raised significant funds in order to complete our product development programs and to market and commercialize our products, including NexoBrid. To date, we have financed our operations primarily through cash received through Epicel and MACI sales, debt and public and private sales of our equity securities. We generated $29.0 million in operating cash flows during 2021 and we may finance our commercial business operations through the sales of equity securities or debt financings.

We believe that our current cash on hand, cash equivalents and investments will be sufficient to support our current operations through at least 12 months from the issuance of the consolidated financial statements included in this Annual Report on Form 10-K. However, the continuing effects of the ongoing COVID-19 pandemic continue to evolve and may result in irrecoverable losses from customers.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented:

	Year Ended December 31,		
	2021	2020	2019
Net cash provided by (used in) operating activities	$ 29,040	$ 17,572	$ (7,183)
Net cash (used in) provided by investment activities	(3,501)	(17,160)	10,615
Net cash provided by financing activities	9,171	6,441	5,260
Net increase in cash, cash equivalents and restricted cash	$ 34,710	$ 6,853	$ 8,692

For a discussion of our liquidity and capital resources related to our cash flow activities for the fiscal year ended December 31, 2019, see “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 fiscal year ended December 31, 2020, filed with the SEC on February 24, 2021.

Net Cash Provided by Operating Activities

Our cash, cash equivalents and restricted cash totaled $68.5 million, short-term investments totaled $35.1 million and long-term investments totaled $25.7 million as of December 31, 2021. The $29.0 million of net cash provided by operations in 2021, was primarily the result of non-cash charges of $34.3 million related to stock compensation expense, $4.4 million in operating lease amortization and $3.0 million in depreciation and amortization expense, offset by a net loss of $7.5 million and a net decrease of $6.2 million related to movements in our working capital accounts. The overall decreases in cash from our working capital accounts were primarily driven by an increase in accounts receivable due to an increase in sales volume, an increase in inventory due to increased production needs and payments on operating leases, offset by an increase of accounts payable and accrued expenses due to timing of payments.

Our cash, cash equivalents and restricted cash totaled $33.8 million, short-term investments totaled $42.2 million and long-term investments totaled $24.1 million as of December 31, 2020. The $17.6 million of net cash provided by operations in 2020, was primarily the result of net income of $2.9 million and non-cash charges of $13.8 million in stock compensation expense, $4.4 million in operating lease amortization and $2.4 million in depreciation and amortization expense, offset by a net decrease of $6.4 million related to movements in our working capital accounts. The overall decreases in cash from our working capital accounts were primarily driven by an increase in accounts receivable due to an increase in sales volume, an increase in inventory due to increased production needs, payments on operating leases, offset by an increase of accrued expenses due to timing of payments.

Net Cash Used in Investing Activities

Net cash used in investing activities during the year ended December 31, 2021 was the result of $64.4 million of investment sales and maturities, offset by $60.0 million in investment purchases and $7.9 million of property and equipment purchases primarily for manufacturing upgrades through December 31, 2021.

Net cash used in investing activities during the year ended December 31, 2020 was the result of $63.1 million in investments purchases offset by $48.5 million of sales and maturities and property and equipment purchases of $2.6 million, primarily for manufacturing upgrades and leasehold improvements through December 31, 2020.

Net Cash Provided by Financing Activities

Net cash provided by financing activities is the result of net proceeds from the exercise of stock options and the employee stock purchase plan of $11.2 million, partially offset by the payment of employee withholding taxes related to the vesting of restricted stock units of $1.7 million during the year ended December 31, 2021.

Net cash provided by financing activities during the year ended December 31, 2020 is primarily the result of net proceeds from the exercise of stock options of $6.6 million.

Sources of Capital

On August 27, 2021, we entered into a Sales Agreement with SVB Leerink LLC, as sales agent ("SVB Leerink"), pursuant to which we may offer and sell up to $200.0 million of shares of our common stock, no par value per share ("ATM Shares"). The ATM Shares to be offered and sold under the Sales Agreement will be issued and sold pursuant to an automatically effective shelf registration statement on Form S-3ASR (File No. 333-259119) filed by us on August 27, 2021, which expires three years from the filing date. We also filed a prospectus supplement relating to the offering and sale of the ATM Shares on August 27, 2021. We are not obligated to make any sales of ATM Shares, and SVB Leerink is not required to sell any specific number or dollar amount of the ATM Shares under the Sales Agreement. As of December 31, 2021, we have sold no shares pursuant to the Sales Agreement.

If revenue declines for a sustained period, we may need to access additional capital; however, we may not be able to obtain financing on acceptable terms or at all. Market volatility could also adversely impact our ability to access financing when needed. The terms of any financing may adversely affect the holdings or the rights of our shareholders. Actual cash requirements may differ from projections and will depend on many factors, including any future impacts of the COVID-19 pandemic, the level of future research and development, the scope and results of ongoing and potential clinical trials, the costs

involved in filing, prosecuting and enforcing patents, the need for additional manufacturing capacity, competing technological and market developments, costs of possible acquisition or development of complementary business activities, and the cost to market our products.

Contractual Obligations

We lease facilities in Ann Arbor, Michigan and Cambridge, Massachusetts. The Cambridge facilities includes clean rooms, laboratories for MACI and Epicel manufacturing and office space. We also pay for use of an offsite warehouse space and lease various vehicles and computer equipment. In October 2020, we amended our current lease in Cambridge to, among other provisions, extend the term until February 2032. Under the amendment, the landlord will contribute $4.3 million toward the cost of tenant improvements. The previous contributions toward the cost of tenant improvements was recorded as part of the operating lease assets under the leasing guidance, on our consolidated balance sheet. Total remaining obligations related to the operating and finance leases are $66.5 million as of December 31, 2021. In January 2022, we entered into a new lease for approximately 126,000 square feet of to-be-constructed manufacturing, laboratory and office space in Burlington, Massachusetts. See Note 15, “Subsequent Events” in our accompanying consolidated financial statements for further information.

Our purchase commitments consist of minimum purchase amounts of materials used in our cell manufacturing process to manufacture our marketed cell therapy products and total $10.1 million as of December 31, 2021, as well as usage of an offsite warehouse space. In February 2021, the terms of the warehouse operating agreement were extended through March 31, 2027, and the total remaining contractual obligations related to the warehouse agreement are $8.3 million as of December 31, 2021. See Note 14, “Commitments and Contingencies” in our accompanying consolidated financial statements for further information.

We have no off-balance sheet arrangements that have or are reasonably likely to have a material effect on our financial condition.

Critical Accounting Policies and Estimates

The preparation of our consolidated financial statements in accordance with U.S. generally accepted accounting principles (“GAAP”) requires management to make estimates and assumptions that could materially impact the consolidated financial statements and disclosures based on varying assumptions. We believe our estimates and assumptions are reasonable; however, actual results and the timing of the recognition of such amounts could differ from these estimates.

The following is a list of accounting policies that are most significant to the portrayal of our financial condition and results of operations and/or that require management’s most difficult, subjective or complex judgments.

Revenue Recognition and Net Product Sales

Revenue from sales to a customer (distributor, hospital or other party) is recognized in accordance with ASC 606, *Revenue Recognition.* We recognize product revenue from sales to a customer (distributor or hospital) following the five step model in ASC 606: (i) identify 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 revenues when (or as) we satisfy the performance obligation. Under this revenue standard, we recognize revenue when our customer obtains control of the promised goods, in an amount that reflects the consideration which we expect to receive in exchange for those goods.

MACI Implants

We have engaged a third-party services provider to provide the patient support program to manage patient cases and to ensure complete and accurate billing information is provided to the insurers and hospitals, to facilitate reimbursement.

Prior authorization and confirmation of coverage level by the patient’s private insurance plan, hospital or government payer is a prerequisite to the shipment of product to a patient. We recognize product revenues from sales of all MACI implants upon delivery at which time the customer obtains control of the implant and the claim is billable. The total consideration which we expect to collect in exchange for MACI implants (the transaction price) may be fixed or variable. Direct sales to hospitals or distributors are recorded at a contracted price, there are typically no forms of variable consideration.

When we sell MACI the patient is responsible for payment; however, we are typically reimbursed by a third-party insurer or government payer, subject to a patient co-pay amount. Reimbursements from third-party insurers and government payers vary by patient and payer and are based on either contracted rates, publicly available rates or a fee schedule. Net product revenue is recognized net of estimated contractual allowances, which considers historical collection experience from both the payer and patient, denial rates and the terms of our contractual arrangements. We estimate expected collections for these transactions using the portfolio approach. We record a reduction to revenue at the time of sale for the estimate of the amount of consideration that will not be collected. In addition, potential credit risk exposure has been evaluated for our accounts receivable in accordance with ASC 326, *Financial Instruments - Credit Losses*. We assess risk and determine a loss percentage by pooling account receivables based on similar risk characteristics. The loss percentage is calculated through the use of forecasts that are based on current and historical economic and financial information.

Changes in estimates of the transaction price are recorded through revenue in the period in which such change occurs. Changes to the estimate of the amount of consideration that will not be collected could have a material impact to the revenue recognized. A 50 basis points change to the estimated uncollectible percentage could result in approximately $0.3 million decrease or increase in the revenue recognized for the year ended December 31, 2021.

Leases

We determine if an arrangement is a lease at inception, in accordance with ASC Topic 842, *Leases*. All operating lease commitments with a lease term greater than 12 months are recognized as right-of-use ("ROU") assets and liabilities, on a discounted basis on the balance sheet. Leases with an initial term of 12 months or less are not recorded on the balance sheet. We primarily enter into lease agreements for manufacturing and office space, warehouses space, vehicle and computer equipment. The leases have varying terms, some of which may include options to extend. Certain of our lease agreements include lease payments that are adjusted periodically for an index or rate. The leases are initially measured using the present value of the projected payments adjusted for the index or rate in effect at the commencement date. Our lease agreements do not contain any material residual value guarantees or material restrictive covenants.

ROU assets represent our right to control the use of an explicitly or implicitly identified fixed asset for a period of time and lease liabilities represent our obligation to make lease payments arising from the lease. Control of an underlying asset is conveyed to us if we obtain the rights to direct the use of and to obtain substantially all of the economic benefits from using the underlying asset.

Lease payments included in the measurement of the lease liability are comprised of fixed payments. Our leases contain non-lease components and activities that do not transfer a good or service to us which were not considered to be components of the contract and therefore were not included in the net ROU assets or lease liabilities.

The lease term for all of our leases include the non-cancellable period of the lease plus any additional periods covered by either an option to extend (or not to terminate) the lease that is reasonably certain to exercise, or an option to extend (or not to terminate) the lease controlled by the lessor.

Stock-Based Compensation

The accounting for stock-based compensation requires us to determine the fair value of common stock issued in the form of stock option awards and restricted stock units. The fair value of restricted stock units held by the employees is determined based on the fair value of our common stock on the date of the grant. We use the value of our common stock at the date of the grant in the calculation of the fair value of our share-based awards. The fair value of stock options held by our employees is determined using a Black-Scholes option valuation method, which is a valuation technique that is acceptable for share-based payment accounting. Key assumptions in determining fair value include volatility, risk-free interest rate, dividend yield and expected term. The assumptions used in calculating the fair value of stock options represent our best estimates; however, these estimates involve inherent uncertainties and the application of management's judgment. As a result, if factors change and different assumptions are used, the stock-based compensation expense could be materially different in the future. In addition, we are required to estimate the expected forfeiture rate and only recognize expense for those stock options expected to vest over the service period. We estimate the forfeiture rate considering the historical experience of our stock-based awards. If the actual forfeiture rate is different from the estimate, we adjust the expense accordingly.

Tax Valuation Allowance

A valuation allowance is recorded if it is more likely than not that a deferred tax asset will not be realized based on the weight of available evidence, both positive and negative. Due to our three-year cumulative loss position and history of operating losses, a full valuation allowance against our net deferred tax assets was considered necessary. We will continue to monitor our cumulative loss position and forecasts and reevaluate the need for a valuation allowance as it could be reversed in future periods.

This summary of significant accounting policies should be read in conjunction with our consolidated financial statements and related notes and this discussion of our results of operations.

Recent Accounting Pronouncements

Refer to Note 2, “Summary of Significant Accounting Policies” in the accompanying consolidated financial statements located under Item 8 of this Annual Report on Form 10-K for information regarding recently issued accounting standards that may have a significant impact on our business.

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

As of December 31, 2021, we held marketable debt securities, which are classified as available-for-sale and carried at fair value in the accompanying consolidated balance sheet included in this Form 10-K. The fair value of our cash equivalents and marketable securities is subject to changes in market interest rates. Our earnings and cash flows are subject to fluctuations due to changes in interest rates, principally in connection with our investments in marketable debt securities. We do not believe we are materially exposed to changes in interest rates related to our investments, and we do not currently use interest rate derivative instruments or hedging transactions to manage exposure to interest rate changes of our investments. We estimate that a 100 basis point, or 1%, unfavorable change in interest rates would have resulted in approximately a $0.4 million and $0.5 million decrease in the fair value of our investment portfolio as of December 31, 2021 and 2020, respectively.

We have evaluated the potential credit risk exposure for our accounts receivable and available-for sale investment securities in accordance with ASC 326, *Financial Instruments - Credit Losses*. See Note 3 and Note 6 in the accompanying consolidated financial statements located under Item 8 of this Annual Report on Form 10-K for further discussion.

We operate in the U.S. only. We are primarily exposed to foreign exchange risk with respect to recognized assets and liabilities due to vendors in countries outside the U.S., which are typically paid in Euro. We do not enter into hedging transactions and do not purchase derivative instruments.

Item 8. ***Consolidated Financial Statements and Supplementary Data***

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Vericel Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Vericel Corporation and its subsidiaries (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of operations, of comprehensive (loss) income, of shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2021, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above 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. Also 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 Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Contractual allowances related to MACI sales subject to third party reimbursement

As described in Note 3 to the consolidated financial statements, when the Company sells MACI to patients, the Company records a reduction of revenue at the time of sale for its estimate of the amount of consideration that will not be collected. As of December 31, 2021, the allowance for this uncollectible consideration was $7.0 million. When the Company sells MACI the patient is responsible for payment, however, the Company is typically reimbursed by a third-party insurer or government payer, subject to a patient co-pay amount. Reimbursements from third-party insurers and government payers vary by patient and payer and are based on either contracted rates, publicly available rates, fee schedules or past payer precedents. Net product revenue is recognized net of estimated contractual allowances, which considers historical collection experience from both the payer and patient, denial rates and the terms of the Company's contractual arrangements.

The principal considerations for our determination that performing procedures relating to contractual allowances related to MACI sales subject to third party reimbursement is a critical audit matter are the significant judgment by management due to the measurement uncertainty involved in developing the estimated contractual allowances, as these estimates are based on assumptions developed using historical collection experience from the payer and current contractual arrangement terms, which in turn led to a high degree of auditor judgment, effort and subjectivity in applying procedures to these assumptions and evaluating audit evidence related to these assumptions.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to revenue recognition, including controls relating to MACI sales subject to third party reimbursement and over the assumptions used to estimate the contractual allowance. These procedures also included, among others, (i) testing management's process and methodology for determining the contractual allowances; (ii) performing an analysis of the past collection history by payer; and (iii) assessing the reasonableness of management's contractual allowances. Evaluating the reasonableness of management's contractual allowances involved assessing management's ability to reasonably estimate the contractual allowance by performing a comparison of the estimated transaction price to actual consideration received, contracted rates, publicly available rates or government fee schedules.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
February 24, 2022

We have served as the Company's auditor since at least 1996, which is when the Company became subject to SEC reporting requirements. We have not been able to determine the specific year we began serving as auditor of the Company.

VERICEL CORPORATION
CONSOLIDATED BALANCE SHEETS
(In thousands)

	December 31,	
	2021	2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 68,330	$ 33,620
Short-term investments	35,068	42,187
Accounts receivable (net of allowance for doubtful accounts of $40 and $143, respectively)	37,437	34,504
Inventory	13,381	9,356
Other current assets	4,246	3,893
Total current assets	158,462	123,560
Property and equipment, net	13,308	7,633
Restricted cash	211	211
Right-of-use assets	45,720	50,105
Long-term investments	25,687	24,099
Other long-term assets	317	—
Total assets	$ 243,705	$ 205,608
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 9,016	$ 6,755
Accrued expenses	14,045	11,293
Current portion of operating lease liabilities	2,950	4,394
Other current liabilities	41	41
Total current liabilities	26,052	22,483
Operating lease liabilities	47,147	48,789
Other long-term liabilities	44	76
Total liabilities	73,243	71,348
COMMITMENTS AND CONTINGENCIES		
Shareholders' equity:		
Common stock, no par value; shares authorized — 75,000; shares issued and outstanding — 46,880 and 45,804, respectively	553,902	510,061
Accumulated other comprehensive (loss) income	(154)	14
Accumulated deficit	(383,286)	(375,815)
Total shareholders' equity	170,462	134,260
Total liabilities and shareholders' equity	$ 243,705	$ 205,608

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

VERICEL CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Year Ended December 31,		
	2021	2020	2019
Product sales, net	$ 153,075	$ 121,968	$ 117,850
Other revenue	3,109	2,211	—
Total revenue	156,184	124,179	117,850
Cost of product sales	50,159	39,951	37,571
Gross profit	106,025	84,228	80,279
Research and development	16,287	13,020	30,391
Selling, general and administrative	97,592	68,836	61,139
Total operating expenses	113,879	81,856	91,530
(Loss) income from operations	(7,854)	2,372	(11,251)
Other income (expense):			
Interest income	224	691	1,614
Interest expense	(4)	(6)	(8)
Other income (expense)	52	(13)	(20)
Total other income (expense)	272	672	1,586
(Loss) income before income taxes	(7,582)	3,044	(9,665)
Income tax (benefit) expense	(111)	180	—
Net (loss) income	$ (7,471)	$ 2,864	$ (9,665)
Net (loss) income per common share:			
Basic	$ (0.16)	$ 0.06	$ (0.22)
Diluted	$ (0.16)	$ 0.06	$ (0.22)
Weighted-average common shares outstanding:			
Basic	46,472	45,221	44,180
Diluted	46,472	47,282	44,180

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

VERICEL CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(In thousands)

	Year Ended December 31,		
	2021	2020	2019
Net (loss) income	$ (7,471)	$ 2,864	$ (9,665)
Other comprehensive (loss) income:			
Unrealized (loss) gain on investments	(168)	(7)	60
Comprehensive (loss) income	$ (7,639)	$ 2,857	$ (9,605)

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

VERICEL CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In thousands)

	Common Stock		Warrants	Accumulated Other Comprehensive	Accumulated	Total Shareholders'
	Shares	Amount	Amount	Gain (Loss)	Deficit	Equity
BALANCE, DECEMBER 31, 2018	43,578	$ 471,180	$ 104	$ (39)	$ (369,014)	$ 102,231
Net loss					(9,665)	(9,665)
Stock-based compensation expense		13,179				13,179
Stock option exercises	1,197	4,354				4,354
Shares issued under the Employee Stock Purchase Plan	69	932				932
Exercise of warrants resulting in issuance of common stock	20	104	(104)			—
Unrealized gain on investments				60		60
BALANCE, DECEMBER 31, 2019	44,864	489,749	—	21	(378,679)	111,091
Net income					2,864	2,864
Stock-based compensation expense		13,843				13,843
Stock option exercises	790	5,582				5,582
Shares issued under the Employee Stock Purchase Plan	117	1,050				1,050
Issuance of stock for restricted stock unit vesting	47					—
Restricted stock withheld for employee tax remittance	(14)	(163)				(163)
Unrealized loss on investments				(7)		(7)
BALANCE, DECEMBER 31, 2020	45,804	510,061	—	14	(375,815)	134,260
Net loss					(7,471)	(7,471)
Stock-based compensation expense		34,322				34,322
Stock option exercises	968	9,928				9,928
Shares issued under the Employee Stock Purchase Plan	43	1,256				1,256
Issuance of stock for restricted stock unit vesting	96					—
Restricted stock withheld for employee tax remittance	(31)	(1,665)				(1,665)
Unrealized loss on investments				(168)		(168)
BALANCE, DECEMBER 31, 2021	46,880	$ 553,902	$ —	$ (154)	$ (383,286)	$ 170,462

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

VERICEL CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2021	2020	2019
Operating activities:			
Net (loss) income	$ (7,471)	$ 2,864	$ (9,665)
Adjustments to reconcile net (loss) income to net cash flows from operating activities:			
Depreciation and amortization	2,965	2,383	1,744
Stock-based compensation expense	34,322	13,843	13,179
Amortization of premiums and discounts on marketable securities	949	318	(610)
Non-cash lease cost	4,422	4,445	2,787
Other	7	93	42
Changes in operating assets and liabilities:			
Inventory	(4,025)	(2,540)	(3,258)
Accounts receivable	(2,933)	(2,336)	(8,714)
Other current assets	(353)	(940)	(106)
Accounts payable	1,491	33	(1,024)
Accrued expenses	2,752	3,345	1,018
Operating lease liabilities	(3,086)	(3,951)	(2,512)
Other non-current assets and liabilities, net	—	15	(64)
Net cash provided by (used in) operating activities	29,040	17,572	(7,183)
Investing activities:			
Purchases of investments	(60,021)	(63,057)	(72,346)
Sales and maturities of investments	64,435	48,523	85,577
Expenditures for property and equipment	(7,915)	(2,626)	(2,616)
Net cash (used in) provided by investing activities	(3,501)	(17,160)	10,615
Financing activities:			
Net proceeds from common stock issuance	11,184	6,632	5,286
Payments on employee's behalf for taxes related to vesting of restricted stock unit awards	(1,665)	(163)	—
Other	(348)	(28)	(26)
Net cash provided by financing activities	9,171	6,441	5,260
Net increase in cash, cash equivalents, and restricted cash	34,710	6,853	8,692
Cash, cash equivalents, and restricted cash at beginning of period	33,831	26,978	18,286
Cash, cash equivalents, and restricted cash at end of period	$ 68,541	$ 33,831	$ 26,978

VERICEL CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)
(In thousands)

	Year Ended December 31,		
	2021	2020	2019
Supplemental disclosure of cash flow information:			
Non-cash information:			
Warrants exercised for common stock	$ —	$ —	$ 104
Right-of-use asset and lease liability recognized	192	29,573	2,599
Additions to property and equipment included in accounts payable	1,373	531	217
Restricted stock held for employee tax remittance included in accounts payable	46	—	—
Cash information:			
Interest paid	$ 4	$ 6	$ 8
Taxes paid	$ 379	$ 147	$ 80

	Year Ended December 31,		
	2021	2020	2019
Reconciliation of amounts within the consolidated balance sheets:			
Cash and cash equivalents	$ 68,330	$ 33,620	$ 26,889
Restricted cash	211	211	89
Total cash, cash equivalents, and restricted cash at end of period	$ 68,541	$ 33,831	$ 26,978

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

VERICEL CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization

Vericel Corporation, a Michigan corporation (together with its consolidated subsidiaries referred to herein as the Company, or Vericel), was incorporated in March 1989 and began employee-based operations in 1991. The Company is a fully-integrated, commercial-stage biopharmaceutical company and is a leader in advanced therapies for the sports medicine and severe burn care markets. Vericel currently markets two cell therapy products in the U.S., MACI® (autologous cultured chondrocytes on porcine collagen membrane) and Epicel® (cultured epidermal autografts).

MACI (autologous cultured chondrocytes on porcine collagen membrane) is an autologous cellularized scaffold product indicated for the repair of symptomatic, single or multiple full-thickness cartilage defects of the knee with or without bone involvement in adults. Epicel (cultured epidermal autografts) is a permanent skin replacement for the treatment of adult and pediatric patients with deep-dermal or full-thickness burns comprising greater than or equal to 30 percent of total body surface area ("TBSA"). The Company also holds an exclusive license from MediWound Ltd. ("MediWound") for North American rights to NexoBrid®, a registration-stage biological orphan product for debridement of severe thermal burns. The Company operates its business primarily in the U.S. in one reportable segment — the research, product development, manufacture and distribution of cellular therapies for use in the treatment of specific diseases.

COVID-19

The ongoing pandemic caused by the spread of a novel strain of coronavirus ("COVID-19") has created significant disruptions to the U.S. and global economy and has contributed to significant volatility in financial markets. The global impact of the outbreak has fluctuated since early 2020. At times, many state, local and national governments – including those in Massachusetts and Michigan, where the Company's operations are located – have responded by issuing, extending and supplementing orders requiring quarantines, restrictions on travel, and the mandatory closure of certain non-essential businesses, among other actions. In the U.S., the status and application of these orders have varied on a state-by-state basis since the early days of the pandemic. Many of the restrictions have been periodically updated as infection rates in the U.S. have risen and fallen, as new virus variants have emerged, as vaccines have been distributed and administered, and as world health leaders learn more about the virus, its transmission pathway and who is most at risk. Because Vericel is deemed an essential business, the Company has been exempted from government orders requiring the closure of workplaces and the cessation of business operations.

Notwithstanding being an essential business, the Company's business and operations at times have been adversely impacted by the ongoing effects of the COVID-19 pandemic. For example, as a result of periodic restrictions placed on the performance of elective surgical procedures, Vericel experienced a significant increase in cancellations of scheduled MACI procedures, as well as a slowdown in new MACI orders during March and April of 2020. The widespread suspension of surgical procedures impacted the Company's business and operations during the first and second quarters of 2020. The level and degree of restriction on elective surgeries, on the ability of patients to seek treatment and on U.S. business operations generally fluctuated throughout 2020 as COVID-19 infection rates rose and fell during the summer months and into the autumn. By the first quarter of 2021, the pandemic's effects on the Company's MACI business had largely dissipated. During the summer of 2021, however, the pandemic's direct and ancillary effects again began to cause some disruption to our MACI business. Following the cessation of COVID-19-related travel restrictions in many parts of the U.S. and the availability of vaccinations in May and June 2021, some MACI patients postponed or delayed treatment – opting instead to take vacation and/or travel. Further, surges of new COVID-19 cases during the second half of 2021 caused by the spread of the "Delta" and "Omicron" variants again caused disruptions to health care networks including restrictions on the performance of elective surgical procedures, the availability of physicians and/or their treatment prioritizations, the level of healthcare facility staffing and, in some instances, the willingness or ability of patients to seek treatment. Consequently, and notwithstanding the widespread distribution of vaccines, these factors contributed to a slowdown of MACI procedures during the third and fourth quarters of 2021. Although hospitals are now better prepared for subsequent surges in COVID-19 patients, the risk remains that regional or local restrictions could again be placed on the performance of elective surgical procedures if the number of COVID-19 infections in the U.S. were to continue to rise, or if new or existing COVID-19 variants render current vaccine treatments ineffective.

Because Epicel is used almost exclusively in an emergent setting by burn centers and surgeons throughout the country, Epicel revenue and procedure volumes have been less affected by the pandemic. Nevertheless, large burns and burn admissions can be affected by restrictions on human activity resulting from more severe government lockdown orders.

At the outset of the pandemic, the Company put in place a comprehensive workplace protection plan, which instituted protective measures in response to COVID-19. Vericel's workplace protection plan has closely followed guidance issued by the Centers for Disease Control and Prevention ("CDC") and has complied with applicable federal and state law. To date, Vericel has been successful in sustaining its operations and providing MACI and Epicel to patients in need. The Company continues to review its policies and procedures regularly, including its workplace protection plan, as the pandemic evolves and the Company may take additional actions to the extent required.

Liquidity

The accompanying consolidated financial statements have been prepared on a basis which assumes that the Company will continue as a going concern and contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. As of December 31, 2021, the Company had an accumulated deficit of $383.3 million and had a net loss of $7.5 million for the year ended December 31, 2021. The Company had cash and cash equivalents of $68.3 million and investments of $60.8 million as of December 31, 2021. The Company expects that cash from the sales of its products and existing cash, cash equivalents and investments will be sufficient to support the Company's current operations through at least 12 months from the issuance of these consolidated financial statements. The effects of the COVID-19 pandemic continue to evolve, however. To the extent the U.S. experiences a continued worsening in COVID-19 infections or the emergence of additional virus variants that result in more serious disease or limit the effectiveness of existing vaccines, subsequent healthcare measures – to include the postponement or cessation of elective and other surgical procedures – may cause the Company to experience a reduction in business and resulting revenue. This, consequently, may result in irrecoverable losses of customers and significantly impact long-term liquidity, requiring the Company to engage in layoffs, furloughs and/or reductions in salaries. The Company also may need to access additional capital; however, the Company may not be able to obtain financing on acceptable terms or at all, particularly in light of the impact of COVID-19 on the global economy and financial markets. The terms of any financing may adversely affect the holdings or the rights of the Company's shareholders.

2. Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements have been prepared in accordance with U.S. GAAP. The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany transactions and accounts have been eliminated in consolidation.

Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. The Company is monitoring the potential impact of the ongoing COVID-19 pandemic on its business and the consolidated financial statements. The more significant estimates reflected in the Company's consolidated financial statements include, but are not limited to, certain judgments regarding revenue recognition, inventory valuation, stock option valuation, deferred tax assets and liabilities and accrued expenses. The Company is not aware of any specific event or circumstance that would require an update to its estimates or judgments reflected in these consolidated financial statements or a revision of the carrying value of its assets or liabilities as of the issuance of these consolidated financial statements. These estimates may change as new events occur and additional information is obtained. Actual results could materially differ from those estimates.

Cash Equivalents

Cash equivalents consist of short-term, highly liquid investments with original maturities of three months or less from the date of purchase and consist primarily of demand deposits, money market funds, overnight repurchase agreements and short duration agency bonds and commercial paper.

Restricted Cash

Amounts included in restricted cash represent those required to be set aside to meet contractual terms of a lease agreement held by the Company.

Investments

Investments classified as short-term have maturities of less than one year. Investments classified as long-term are those that: (i) have a maturity of greater than one year, and (ii) the Company does not intend to liquidate within the next twelve months, although these funds are available for use and, therefore, are classified as available-for-sale. The Company's investment strategy is to buy short-duration marketable securities with a high credit rating. As of December 31, 2021 and 2020, all marketable securities held by the Company had remaining contractual maturities of three years or less.

Unrealized gains are included as a component of accumulated other comprehensive income in the consolidated balance sheets and consolidated statements of shareholders' equity and a component of total comprehensive (loss) income in the consolidated statements of comprehensive (loss) income, until realized. Unrealized losses are evaluated for impairment under ASC 326, *Financial Instruments - Credit Losses* ("ASC 326"), to determine if the impairment is credit-related or non-credit-related. Credit-related impairment is recognized as an allowance on the balance sheet with a corresponding adjustment to earnings, and non-credit-related impairment is recognized in other comprehensive (loss) income, net of taxes.

Leases

The Company determines if an arrangement is a lease at inception, in accordance with ASC Topic 842, *Leases*. All operating lease commitments with a lease term greater than 12 months are recognized as right-of-use assets and liabilities, on a discounted basis on the balance sheet. Leases with an initial term of 12 months or less are not recorded on the balance sheet. Certain of the Company's lease agreements include lease payments that are adjusted periodically for an index or rate. The leases are initially measured using the present value of the projected payments adjusted for the index or rate in effect at the commencement date. In addition to rent, the leases may require the Company to pay additional amounts for taxes, insurance, maintenance and other expenses, which do not transfer a good or service to the Company and are generally referred to as non-lease components. Variable non-lease components are not measured as part of the right-of-use asset and liability. Only when lease components and their associated non-lease components are fixed are they accounted for as a single lease component and are recognized as part of a right-of-use asset and liability. The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

The Company has options to renew lease terms for facilities and other assets. Some leases contain clauses for renewal at the Company's option with renewal terms that generally extend the lease term from 1 to 5 years. The exercise of lease renewal options is generally at the Company's sole discretion. The Company evaluates renewal and termination options at the lease commencement date to determine if it is reasonably certain to exercise the option on the basis of economic factors. For certain leases, the Company's exercise of the renewal option was determined to be probable and the renewal period was accordingly included in the lease term and related calculations. Certain lease agreements contain options to purchase the leased property and options to terminate the lease. A portfolio approach is applied to certain lease contracts with similar characteristics.

Inventory

Inventories are measured at the lower of cost or net realizable value. Cost is calculated based upon standard-cost which approximates costs determined on the first-in, first-out method. The Company periodically reviews its inventories for excess or obsolescence and writes down obsolete or other unmarketable inventory to its estimated net realizable value. If the actual net realizable value is less than that estimated by the Company, or if it is determined that inventory utilization will further diminish based on estimates of demand, additional inventory write-downs may be required. In all cases, product inventory is carried at the lower of cost or its estimated net realizable value. Amounts written down are charged to cost of product sales.

Accounts Receivable

Accounts receivable are initially recorded at the contractual amount owed by the customer or based on expected payments from the insurance provider, hospital or patient. Allowances for doubtful accounts are established when the facts and circumstances indicate that a receivable may not be collectible. Potential credit risk exposure has been evaluated for the Company's accounts receivable in accordance with ASC 326. The Company assesses risk and determines a loss percentage by pooling account receivables based on similar risk characteristics. The loss percentage is calculated through the use of forecasts that are based on current and historical economic and financial information.

Property and Equipment, net

Property and equipment are initially measured and recognized at acquisition cost, including any directly attributable cost of preparing the asset for its intended use. After initial measurement, property and equipment are carried at cost less accumulated depreciation and impairment. Repair and maintenance costs of property and equipment are expensed as incurred.

The depreciable value of property and equipment is depreciated on a straight-line basis over the useful life of the asset. The useful life of an asset is usually equivalent to its economic life. The useful lives of property and equipment are as follows:

- Machinery and Equipment: 5 years
- Furniture, fixtures, and office equipment: 3 to 5 years
- Computer equipment and software: 3 years
- Building improvements and leasehold improvements: Shorter of the remaining life of the lease or 10 years

The costs of assets retired or otherwise disposed of and the accumulated depreciation thereon are removed from the accounts, with any gain or loss realized upon sale or disposal credited or charged to operations.

Revenue Recognition and Net Product Sales

The Company recognizes product revenue from sales to a customer (whether a distributor, or hospital) following the five step model in Accounting Standards Codification 606, *Revenue Recognition (*"ASC 606"): (i) identify 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 revenues when (or as) the Company satisfies the performance obligation. Under this revenue standard, the Company recognizes revenue when its customer obtains control of the promised goods, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods. There are no contractual rights of returns, refunds or similar obligations related to MACI, kits, Epicel or NexoBrid; however, in certain limited cases the Company will accept a product return if a surgery is canceled. Revenue is not recognized in certain canceled cases.

For MACI, MACI kits and Epicel there are no variable pricing arrangements related to warranties or rebates offered to customers. The majority of orders are due within 60 to 90 days of delivery. Shipping and handling fees are included as a component of revenue. The Company recognizes any commission fees as an expense when incurred. These fees are included in selling, general, and administrative expenses. See Note 3, "Revenue" for further discussion on revenues.

Research and Development Expense

Research and development expenses are expensed as incurred. These expenditures relate to the development of new products, improvement of existing products, technical support of products and compliance with governmental regulations for the protection of consumers and patients.

Stock-Based Compensation

The Company's accounting for stock-based compensation requires it to determine the fair value of common stock issued in the form of stock option awards and restricted stock units. The fair value of restricted stock units held by the employees is determined based on the fair value of the Company's common stock on the date of the grant. Compensation expense is recorded for restricted stock units that are expected to vest over the expected vesting period. The fair value of stock options held by the employees is determined using a Black-Scholes option valuation method. Key assumptions in determining fair value include volatility, risk-free interest rate, dividend yield and expected term. The assumptions used in calculating the fair value of stock options represent the Company's best estimates; however, these estimates involve inherent uncertainties and the application of management's judgment. As a result, if factors change and different assumptions are used, the stock-based compensation expense could be materially different in the future. In addition, the Company estimates the expected forfeiture rate and only recognizes expense for those stock options expected to vest over the service period. The estimated forfeiture rate considers the historical experience of the Company's stock-based awards. If the actual forfeiture rate is different from the estimate, expense is adjusted accordingly. For certain non-employee consultants, stock option awards continue to vest post-termination.

The Company also has an Employee Stock Purchase Plan ("ESPP") which is a compensatory plan. Compensation expense is recorded based on the fair value of the purchased options at the grant date, which corresponds to the first day of each purchase period, and is amortized over the purchase period.

Comprehensive (Loss) Income

Comprehensive (loss) income is the change in shareholders' equity during a period arising from any gain or loss unrealized related to the Company's investments.

Income Taxes

Deferred tax assets are recognized for deductible temporary differences and tax credit carryforwards and deferred tax liabilities are recognized for taxable temporary differences. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized based on the weight of available evidence. When evaluating the realizability of the deferred tax assets, all evidence, both positive and negative, is considered. Items considered when evaluating the need for a valuation allowance include the ability to carry back losses, future reversals of existing temporary differences, tax planning strategies, and expectations of future earnings.

The Company records uncertain tax positions in the consolidated financial statements only if it is more likely than not that the uncertain tax position will be sustained upon examination by the taxing authorities. The Company records interest and penalties related to uncertain tax positions in income tax expense.

Net (Loss) Income Per Common Share

Basic earnings per common share is computed by dividing net income by the weighted-average number of shares of common stock outstanding during the period. Diluted earnings per common share is computed by dividing net income by the weighted-average number of shares of common stock outstanding during the period, plus the potential dilutive effect of other securities if those securities were converted or exercised. During periods in which the Company incurs net losses, both basic and diluted loss per common share is calculated by dividing the net loss by the weighted-average shares of common stock outstanding and potentially dilutive securities are excluded from the calculation because their effect would be antidilutive.

Financial Instruments

The Company's financial instruments include accounts receivables, accounts payable and accrued expenses for which the current carrying amounts approximate market value, based upon their short-term nature and marketable debt securities which are classified as available-for-sale and carried at fair value on a settlement date basis.

Recent Accounting Pronouncements

Accounting Standards adopted during the year ended December 31, 2021.

Standard	Description	Effective Date for Company	Effect on the consolidated financial statements
ASU 2019-12, *Simplifying the Accounting for Income Taxes (ASC 740)*	The ASU enhances and simplifies various aspects of the income tax accounting guidance in ASC 740, including requirements related to hybrid tax regimes, the tax basis step-up in goodwill obtained in a transaction that is not a business combination, separate financial statements of entities not subject to tax, the intra-period tax allocation exception to the incremental approach, ownership changes in investments, changes from a subsidiary to an equity method investment, interim-period accounting for enacted changes in tax law, and the year-to-date loss limitation in interim-period tax accounting.	January 1, 2021	The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

3. Revenue

Revenue Recognition and Net Product Sales

As disclosed in Note 2, the Company recognizes product revenue from sales of MACI biopsy kits, MACI implants, Epicel grafts and other sources following the five-step model in ASC 606.

MACI Biopsy Kits

MACI biopsy kits are sold directly to hospitals and ambulatory surgical centers based on contracted rates in an approved contract or sales order. The Company recognizes MACI kit revenue upon delivery of the biopsy kit, at which time the customer (the facility) is in control of the kit. The kit is used by the doctor to provide a sample of cartilage tissue to the Company, which can later be used to manufacture a MACI implant. The ordering of the kit does not obligate the Company to manufacture an implant nor does the receipt of the cartilage tissue. The customer's order of an implant is separate from the process of ordering the biopsy kit. Therefore, the sale of the biopsy kit and any subsequent sale of an implant are distinct contracts and are accounted for separately.

MACI Implants

The Company contracts with two specialty pharmacies, Orsini Pharmaceutical Services, Inc. ("Orsini") and AllCare Plus Pharmacy, Inc. ("AllCare") to distribute MACI in a manner in which the Company retains the credit and collection risk from the end customer. The Company pays both specialty pharmacies a fee for each patient to whom MACI is dispensed. Both Orsini and AllCare perform collection activities to collect payment from customers. The Company engages a third-party to provide services in connection with a patient support program to manage patient cases and to ensure complete and correct billing information is provided to the insurers and hospitals. In addition, the Company also sells MACI directly to DMS Pharmaceutical ("DMS") for patients treated at military treatment facilities. The sales directly to DMS are made at a contracted rate.

Prior authorization and confirmation of coverage level by the patient's private insurance plan, hospital or government payer is a prerequisite to the shipment of product to a patient. The Company recognizes product revenue from sales of all MACI implants upon delivery at which time the customer obtains control of the implant and the claim is billable. The total consideration which the Company expects to collect in exchange for MACI implants (the transaction price) may be fixed or variable. Direct sales to hospitals or distributors are recorded at a contracted price, and there are typically no forms of variable consideration.

When the Company sells MACI the patient is responsible for payment; however, the Company is typically reimbursed by a third-party insurer or government payer, subject to a patient co-pay amount. Reimbursements from third-party insurers and government payers vary by patient and payer and are based on either contracted rates, publicly available rates, fee schedules or past payer precedents. Net product revenue is recognized net of estimated contractual allowances, which considers historical collection experience from both the payer and patient, denial rates and the terms of the Company's contractual arrangements. The Company estimates expected collections for these transactions using the portfolio approach. The Company records a reduction to revenue at the time of sale for its estimate of the amount of consideration that will not be collected. In addition, potential credit risk exposure has been evaluated for the Company's accounts receivable in accordance with ASC 326. The Company assesses risk and determines a loss percentage by pooling account receivables based on similar risk characteristics. The loss percentage is calculated through the use of forecasts that are based on current and historical economic and financial information. This loss percentage was applied to the accounts receivables as of December 31, 2021. The total allowance for uncollectible consideration was $7.0 million and $5.3 million as of December 31, 2021, and 2020, respectively. Changes to the estimate of the amount of consideration that will not be collected could have a material impact to the revenue recognized. A 50 basis points change to the estimated uncollectible percentage could result in approximately $0.3 million decrease or increase in the revenue recognized for the year ended December 31, 2021.

Changes in estimates of the transaction price are recorded through revenue in the period in which such change occurs. Changes in estimates related to prior periods are shown in the Revenue by Product and Customer table below and relate primarily to changes in the initial expected reimbursement or collection expectation upon completion of the billing claims process for MACI implants that occurred in a prior year.

Epicel

The Company sells Epicel directly to hospitals and burn centers based on contracted rates stated in an approved contract or purchase order. Similar to MACI, there is no obligation to manufacture Epicel grafts upon receipt of a skin biopsy, and Vericel has no contractual right to receive payment until the product is delivered to the hospital. The Company recognizes product revenue from sales of Epicel upon delivery to the hospital, at which time the customer is in control of the Epicel grafts and the claim is billable to the hospital.

NexoBrid

The Company entered into exclusive license and supply agreements with MediWound in May 2019, under which MediWound will manufacture and supply NexoBrid on a unit price basis, which may be increased pursuant to the terms of the agreement. The U.S. Biomedical Advanced Research and Development Authority ("BARDA") has committed to procure NexoBrid from MediWound and, as of December 31, 2021, the Company did not hold a direct contract or distribution agreement with BARDA, or take title to the product. The Company recognizes revenue based on a percentage of gross profits for sales of NexoBrid to BARDA upon delivery, at which time BARDA is in control of the product.

Revenue by Product and Customer

The following table and descriptions below shows the products from which the Company generated its revenue:

	Year Ended December 31,		
Revenue by product (in thousands)	**2021**	**2020**	**2019**
MACI implants and kits			
Implants based on contracted rate sold through a specialty pharmacy [(a)]	$ 71,969	$ 57,593	$ 56,185
Implants subject to third party reimbursement sold through a specialty pharmacy [(b)]	16,000	16,320	17,076
Implants sold direct based on contracted rates [(c)]	18,714	15,144	13,933
Implants sold direct subject to third-party reimbursement [(d)]	2,821	2,754	1,529
Biopsy kits - direct bill	2,194	1,908	2,243
Change in estimates related to prior periods [(e)]	(144)	713	654
Total MACI implants and kits	111,554	94,432	91,620
Epicel			
Direct bill (hospital)	41,521	27,536	26,230
NexoBrid revenue [(f)]	3,109	2,211	—
Total revenue	$ 156,184	$ 124,179	$ 117,850

(a) Represents implants sold through Orsini and AllCare whereby such specialty pharmacies have a direct contract with the underlying insurance provider. The amount of reimbursement is based on contracted rates at the time of sale supported by the pharmacy's direct contracts.

(b) Represents implants sold through Orsini or AllCare whereby such specialty pharmacy does not have a direct contract with the underlying payer. The amount of reimbursement is established based on a payer or state fee schedule and/or payer history.

(c) Represents implants sold directly from the Company to the facility based on a contract and known price agreed upon prior to the surgery date. Also represents direct sales under a contract to specialty distributor DMS.

(d) Represents implants sold directly from the Company to the facility based on a contract and known price agreed upon prior to the surgery date. The payment terms are subject to third-party reimbursement from an underlying insurance provider.

(e) Primarily represents changes in estimates related to implants sold through Orsini or AllCare in which such specialty pharmacy does not have a direct contract with the underlying payer. The initial estimate of the amount of reimbursement is established based on a payer or state fee schedule and/or payer history. The change in estimates is a result of additional information, changes in collection expectations or actual cash collections received in the current period.

(f) Represents revenue based on a percentage of gross profits for sales of NexoBrid to BARDA, pursuant to the license agreement between the Company and MediWound.

Concentration of Credit Risk

The Company's total revenue concentration from an Epicel customer for the year ended December 31, 2021 was 10%. There was no revenue concentration for the years ended December 31, 2020 or 2019, greater than 10%. For the Company's total accounts receivable balances, there were no customers for the year ended December 31, 2021, 2020 and 2019, respectively, with a concentration greater than 10%.

4. Selected Balance Sheet Components

Inventory

Inventory as of December 31, 2021 and 2020:

(In thousands)	2021	2020
Raw materials	$ 12,676	$ 8,775
Work-in-process	644	537
Finished goods	61	44
Total inventory	$ 13,381	$ 9,356

Property and Equipment

Property and Equipment, net as of December 31, 2021 and 2020:

(In thousands)	2021	2020
Machinery and equipment	$ 4,522	$ 3,672
Furniture, fixtures and office equipment	1,551	809
Computer equipment and software	7,769	6,846
Leasehold improvements	10,617	5,560
Construction in process	3,097	2,021
Financing right-of-use lease	74	111
Total property and equipment, gross	27,630	19,019
Less accumulated depreciation	(14,322)	(11,386)
Total property and equipment, net	$ 13,308	$ 7,633

Depreciation expense for the years ended December 31, 2021, 2020 and 2019 was $3.0 million, $2.4 million and $1.7 million, respectively.

Accrued Expenses

Accrued Expenses as of December 31, 2021 and 2020:

(In thousands)	2021	2020
Bonus related compensation	$ 6,305	$ 5,721
Employee related accruals	3,616	3,482
Insurance reimbursement-related liabilities	3,973	2,016
Other accrued expenses	151	74
Total accrued expenses	$ 14,045	$ 11,293

5. Leases

The Company leases facilities in Ann Arbor, Michigan and Cambridge, Massachusetts. The Ann Arbor facility includes office space, and the Cambridge facilities includes clean rooms, laboratories for MACI and Epicel manufacturing and office space. The Company also leases offsite warehouse space, vehicles and computer equipment. See Note 15, "Subsequent Events" for discussion on a material lease entered into in January 2022.

Effective October 21, 2020 the Company entered into an agreement with one of its Cambridge, Massachusetts facility leases. The agreement extended the terms of the lease to expire on February 29, 2032, with monthly contractual lease payments ranging from $0.4 million to $0.6 million. The agreement also provides a tenant improvement allowance of approximately $4.3 million, available through December 31, 2023. At the onset of the lease, the estimated contribution by the landlord toward the cost of tenant improvements is recorded as a reduction of the right-of-use asset and operating lease liability.

For the year ended December 31, 2021 and 2020, lease expense of less than $0.1 million was recorded related to short-term leases. For the years ended December 31, 2021, 2020 and 2019, the Company recognized $7.3 million, $6.3 million and $5.4 million, respectively, of operating lease expense. For the years ended December 31, 2021, 2020 and 2019, the Company recognized less than $0.1 million of financing lease expense.

Operating and finance lease assets and liabilities are as follows:

		December 31,	
(In thousands)	**Classification**	**2021**	**2020**
Assets			
Operating	Right-of-use assets	$ 45,720	$ 50,105
Finance	Property and equipment, net	73	111
Total leased assets		$ 45,793	$ 50,216
Liabilities			
Current			
Operating	Current portion of operating lease liabilities	$ 2,950	$ 4,394
Finance	Other current liabilities	41	41
		$ 2,991	$ 4,435
Non-current			
Operating	Operating lease liabilities	$ 47,147	$ 48,789
Finance	Other long-term liabilities	44	76
Total leased liabilities		$ 47,191	$ 48,865

Cash paid for amounts included in the measurement of the Company's operating lease liabilities was $6.0 million, $5.8 million, and $5.0 million for the year ended December 31, 2021, 2020, and 2019, respectively.

Future minimum lease payments under non-cancellable lease as of December 31, 2021 are as follows:

(In thousands)	**Operating Leases**	**Finance Leases**	**Total**
2022	$ 2,950	$ 41	$ 2,991
2023	6,634	44	6,678
2024	6,946	—	6,946
2025	6,348	—	6,348
2026	6,530	—	6,530
Thereafter	36,977	—	36,977
Total lease payments	$ 66,385	$ 85	$ 66,470
Less: interest	(16,288)	—	(16,288)
Present value of lease liabilities	$ 50,097	$ 85	$ 50,182

An explicit rate is not provided in some of the Company's leases, therefore the Company uses a mix of incremental borrowing rate based on the information available at commencement date through market sources including relevant peer borrowing rates, as well as implicit and explicit rates in determining the present value of lease payments.

Lease terms and discount rates as of December 31, 2021 and 2020 are as follows:

	December 31,	
	2021	2020
Weighted-average remaining lease term (years)		
Operating leases	9.8	10.6
Finance leases	1.5	2.5
Weighted-average discount rate		
Operating leases	5.4%	5.4%
Finance leases	5.0%	5.0%

6. Investments

Marketable debt securities held by the Company are classified as available-for-sale pursuant to ASC 320, *Investments – Debt and Equity Securities*, and carried at fair value in the accompanying consolidated balance sheets on a settlement date basis. The following tables summarize the gross unrealized gains and losses of the Company's marketable securities as of December 31, 2021 and 2020:

	December 31, 2021				
(In thousands)	Amortized Cost	Gains	Gross Unrealized Losses	Credit Losses	Estimated Fair Value
Commercial paper	$ 10,243	$ —	$ (12)	$ —	$ 10,23
Corporate notes	50,666	—	(142)	—	50,52
	$ 60,909	$ —	$ (154)	$ —	$ 60,75
Classified as:					
Short-term investments					$ 35,06
Long-term investments					25,68
					$ 60,75

	December 31, 2020				
(In thousands)	Amortized Cost	Gains	Gross Unrealized Losses	Credit Losses	Estimated Fair Value
Commercial paper	$ 8,993	$ 1	$ —	$ —	$ 8,994
Corporate notes	35,917	—	—	(6)	35,911
U.S. government securities	12,828	14	—	—	12,842
U.S. government agency bonds	5,000	1	—	—	5,001
U.S. asset-backed securities	3,534	4	—	—	3,538
	$ 66,272	$ 20	$ —	$ (6)	$ 66,286
Classified as:					
Short-term investments					$ 42,187
Long-term investments					24,099
					$ 66,286

As of December 31, 2021, the analysis under ASC 326 and the current macroeconomic impact of the ongoing COVID-19 pandemic did not result in material allowances for credit losses. There have been no impairments of the Company's assets measured and carried at fair value during the years ended December 31, 2021 or 2020.

7. Stock-Based Compensation

Stock Option, Restricted Stock Units and Equity Incentive Plans

The Company has historically had various stock incentive plans and agreements that provide for the issuance of non-qualified and incentive stock options and restricted stock units as well as other equity awards. Such awards may be granted by the Company's Board of Directors to certain of the Company's employees, directors and consultants.

Options and restricted stock units granted to employees and non-employees under these plans expire no later than ten years from the date of grant. Options and restricted stock units generally become exercisable or vest over a four year period (other than options and restricted stock units awarded annually to non-employee directors, which generally vest over one year, and options and restricted stock units awarded to non-employee directors upon initial appointment to the Vericel Board of Directors, which generally vest over a three year period), under a graded-vesting methodology for stock options and annually on the anniversary grant date for restricted stock units, following the date of grant. The Company generally issues new shares upon the exercise of stock options or vesting of restricted stock units.

The Company's Amended and Restated 2019 Omnibus Incentive Plan ("2019 Plan") was approved on April 29, 2020 and provides incentives through the grant of stock options, stock appreciation rights, restricted stock awards and restricted stock units. The exercise price of stock options granted under the 2019 Plan shall not be less than the fair market value of the Company's common stock on the date of grant. The 2019 Plan replaced the 1992 Stock Option Plan, the 2001 Stock Option Plan, the Amended and Restated 2004 Equity Incentive Plan, the 2009 Second Amended and Restated Omnibus Incentive Plan and the 2017 Omnibus Incentive Plan ("Prior Plans"), and no new grants have been granted under the Prior Plans after approval of the 2019 Plan. However, the expiration or forfeiture of options previously granted under the Prior Plans will increase the number of shares available for issuance under the 2019 Plan.

As of December 31, 2021, there were 2,822,710 shares available for future grant under the 2019 Plan.

Stock Compensation Expense

Non-cash stock-based compensation expense (service-based stock options, restricted stock units and employee stock purchase plan) is summarized in the following table:

	Years Ended December 31,		
(in thousands)	**2021**	**2020**	**2019**
Cost of product sales	$ 3,681	$ 1,949	$ 2,029
Research and development	4,120	1,884	2,428
Selling, general and administrative	26,521	10,010	8,722
Total non-cash stock-based compensation expense	$ 34,322	$ 13,843	$ 13,179

Service-Based Stock Options

The fair value of each service-based stock option grant for the reported periods is estimated on the date of the grant using the Black-Scholes option-pricing model using the assumptions noted in the following table:

	Year Ended December 31,		
Service-Based Stock Options	**2021**	**2020**	**2019**
Expected dividend rate	—%	—%	—%
Expected stock price volatility	71.5 - 76.7%	71.1 - 78.7%	77.9 - 85.5%
Risk-free interest rate	0.53 - 1.5%	0.33 - 1.7%	1.4 - 2.7%
Expected life (years)	5.3 - 6.3	5.3 - 6.3	5.3 - 6.3

The weighted-average grant-date fair value of service-based options granted during the years ended December 31, 2021, 2020, and 2019 was $32.96, $8.86 and $12.62, respectively.

The following table summarizes the activity for service-based stock options for the indicated periods:

Service-Based Stock Options	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (Thousands)
Outstanding at December 31, 2020	5,236,044	$ 11.34	7.3	$ 102,654
Granted	1,683,568	50.84		
Exercised	(968,261)	10.25		
Expired	(12,126)	43.48		
Forfeited	(269,535)	26.05		
Outstanding at December 31, 2021	5,669,690	$ 22.49	7.2	$ 113,985
Exercisable at December 31, 2021	3,169,562	$ 13.07	6.1	$ 86,141

As of December 31, 2021, 5,359,392 shares are vested and expected to vest. As of December 31, 2021, there was approximately $36.0 million of total unrecognized compensation cost related to non-vested service-based stock options granted under the 2019 Plan and the Prior Plans. That cost is expected to be recognized over a weighted-average period of 3.0 years.

The total intrinsic value of stock options exercised for the years ended December 31, 2021, 2020, and 2019 was $39.5 million, $10.5 million and $16.1 million, respectively.

Restricted Stock Units

The following table summarizes the activity for restricted stock units for the indicated periods:

Restricted Stock Units	Number of Restricted Stock Units	Weighted-Average Grant Date Fair Value
Outstanding at December 31, 2020	270,639	$ 13.57
Granted	266,759	52.07
Vested	(98,597)	18.88
Forfeited	(40,053)	30.63
Unvested at December 31, 2021	398,748	$ 36.30

The weighted-average grant-date fair value of restricted stock units granted during the years ended December 31, 2021, 2020, and 2019 was $52.07, $11.41 and $17.71, respectively.

At December 31, 2021 the total unrecognized compensation cost related to the restricted stock units was $8.8 million, and the weighted-average period over which that cost is expected to be recognized was 2.9 years. The total fair value of restricted stock units vested in the years ended December 31, 2021 and 2020 was $5.3 million and $0.6 million, respectively.

Employee Stock Purchase Plan

Employees are able to purchase stock under the ESPP. The ESPP allows for the issuance of an aggregate of 1.0 million shares of common stock of which 745,655 have been issued since the inception of the benefit in 2015. Participation in this plan is available to substantially all employees. The ESPP is a compensatory plan accounted for under the expense recognition provisions of the share-based payment accounting standards. Compensation expense is recorded based on the fair market value of the purchase options at the grant date, which corresponds to the first day of each purchase period and is amortized over the purchase period.

8. Net (Loss) Income Per Common Share

A summary of net (loss) income per common share is presented below:

(Amounts in thousands, except per share amounts)	Year Ended December 31, 2021	2020	2019
Net (loss) income	$ (7,471)	$ 2,864	$ (9,665)
Basic weighted-average common shares outstanding	46,472	45,221	44,180
Effect of dilutive stock options and restricted stock units	—	2,061	—
Diluted weighted-average common shares outstanding	46,472	47,282	44,180
Basic (loss) income per common share	$ (0.16)	$ 0.06	$ (0.22)
Diluted (loss) income per common share	$ (0.16)	$ 0.06	$ (0.22)
Anti-dilutive shares excluded from diluted net (loss) income per common share:			
Stock options	5,670	2,204	5,053
Restricted stock units	399	—	157

9. Shareholder's Equity

At-the-Market Offering

On August 27, 2021, the Company entered into a Sales Agreement with SVB Leerink LLC, as sales agent ("SVB Leerink"), pursuant to which it may offer and sell up to $200.0 million of shares of the Company's common stock, no par value per share ("ATM Shares"). The ATM Shares to be offered and sold under the Sales Agreement will be issued and sold pursuant to an automatically effective shelf registration statement on Form S-3ASR (File No. 333-259119) filed by the Company on August 27, 2021, which expires three years from the filing date. The Company also filed a prospectus supplement relating to the offering and sale of the ATM Shares on August 27, 2021. The Company is not obligated to make any sales of ATM Shares, and SVB Leerink is not required to sell any specific number or dollar amount of the ATM Shares under the Sales Agreement. The Company capitalizes certain legal, professional accounting and other third-party fees that are directly associated with in-process stock financings as deferred offering costs until such financings are consummated. As of December 31, 2021, the Company has sold no shares pursuant to the Sales Agreement.

10. Fair Value Measurements

The Company's fair value measurements are classified and disclosed in one of the following three categories:

- Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;
- Level 2: Quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability;
- Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The commercial paper, corporate notes, U.S. government securities, U.S. government agency bonds and U.S. asset-backed securities are classified as Level 2 as they were valued based upon quoted market prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant inputs are observable in the market or can be corroborated by observable market data for substantially the full term of the assets. There were no transfers into or out of Level 3 from December 31, 2019 to December 31, 2021.

The following table summarizes the valuation of the Company's financial instruments that are measured at fair value on a recurring basis:

(In thousands)	December 31, 2021				December 31, 2020			
		Fair value measurement category				Fair value measurement category		
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
Assets:								
Money market funds	$ 1,258	$ 1,258	$ —	$ —	$ 3,698	$ 3,698	$ —	$ —
Commercial paper [a]	18,229	—	18,229	—	8,994	—	8,994	—
Corporate notes	50,524	—	50,524	—	35,911	—	35,911	—
U.S. government securities	—	—	—	—	12,842	—	12,842	—
U.S. government agency bonds	—	—	—	—	5,001	—	5,001	—
U.S. asset-backed securities	—	—	—	—	3,538	—	3,538	—
	$ 70,011	$ 1,258	$ 68,753	$ —	$ 69,984	$ 3,698	$ 66,286	$ —

[a] Approximately $8.0 million of commercial paper has an original maturity of 90 days or less and is recorded as a cash equivalent as of December 31, 2021.

The fair values of the cash equivalents and marketable securities are based on observable market prices. The Company's accounts receivables, accounts payable and accrued expenses are valued at cost which approximates fair value.

11. Income Taxes

The components of (loss) income before income taxes are summarized as follows:

(In thousands)	Year Ended December 31,		
	2021	2020	2019
U.S.	$ (7,367)	$ 2,767	$ (9,632)
Foreign	(104)	97	(33)
(Loss) income before income taxes	$ (7,471)	$ 2,864	$ (9,665)

A reconciliation of income taxes computed using the U.S. federal statutory rate to the taxes reported in the consolidated statements of operations is as follows:

(In thousands)	Year Ended December 31,		
	2021	2020	2019
(Loss) income before income taxes	$ (7,471)	$ 2,864	$ (9,665)
Federal statutory rate	21 %	21 %	21 %
Taxes computed at federal statutory rate	(1,569)	601	(2,030)
State and local income taxes	(345)	200	(484)
Nondeductible stock-based compensation	(4,311)	437	(1,329)
Federal and state rate change	47	249	(164)
Research and orphan drug credits	(413)	(8,827)	—
Other	(87)	132	(49)
Change in valuation allowance	6,567	7,388	4,056
Reported income taxes	$ (111)	$ 180	$ —

Deferred tax assets (liabilities) consist of the following:

(In thousands)	Year Ended December 31, 2021	2020
Deferred tax assets:		
Net operating loss carryforwards	$ 11,571	$ 8,411
Employee benefits and stock-based compensation	11,470	5,692
Research and development costs	5,059	6,411
Intangible assets	2,544	3,279
Operating lease liabilities	12,822	13,687
Inventory reserve	2,833	3,813
Tax credit carryforward	10,498	10,085
Other, net	13	38
Total deferred tax assets	56,810	51,416
Less: valuation allowance	(43,947)	(37,379)
Total net deferred tax assets	12,863	14,037
Deferred tax liabilities:		
Right-of-use assets	(12,266)	(13,463)
Property and equipment, net	(597)	(574)
Total net deferred tax liabilities	(12,863)	(14,037)
Net deferred tax assets and liabilities	$ —	$ —

As of December 31, 2021, the Company's U.S. federal and state tax net operating loss carryforwards available to offset future profits, after considering the annual Section 382 limit described below, are $44.3 million and $29.3 million, respectively. These net operating loss carryforwards will expire between 2022 and 2039 with the exception of the federal net operating losses generated in 2018 and 2021. The federal net operating losses of $1.5 million generated in 2018 and $6.4 million generated in 2021 can be carried forward indefinitely. The projected annual limitation on the use of the net operating losses that existed prior to September 17, 2014 resulting from the Company's change in control in 2014 per Section 382 of the Internal Revenue Code is $0.8 million. As a result, a significant portion of the net operating losses and tax credit carryforwards will expire prior to their utilization, regardless of the level of future profitability. As of December 31, 2021, the Company's U.S. federal tax credit carryforwards available to offset future profits are $10.5 million. Based on the research and development and orphan drug credit tax studies performed during 2020, the Company had a sufficient basis to claim the credits and recognized a tax credit carryforward in the 2020 tax year. These credit carryforwards will expire between 2034 and 2040.

In accordance with the accounting guidance for income taxes, the Company estimates whether recoverability of its deferred tax assets is "more likely than not", based on forecasts of taxable income in the related tax jurisdictions. In this estimate, the Company uses historical results, projected future operating results based upon approved business plans, eligible carry forward periods, tax planning opportunities and other relevant considerations. Based on these factors, including historical losses incurred by the Company, a full valuation allowance for the deferred tax assets, including the deferred tax assets for the aforementioned net operating losses and credits has been provided, since they are not more likely than not to be realized. If sufficient positive evidence exists in future periods to support a release of some or all of the valuation allowance, such a release would likely have a material impact on the Company's results of operations. The change in the valuation allowance was an increase of $6.6 million and $7.4 million for the years ended December 31, 2021 and 2020, respectively.

The Company assesses uncertain tax positions in accordance with the guidance for accounting for uncertain tax positions. This pronouncement prescribes a recognition threshold and measurement methodology for recording within the consolidated financial statements uncertain tax positions taken, or expected to be taken, in the Company's income tax returns. To the extent the uncertain tax positions do not meet the "more likely than not" threshold, the Company derecognizes such positions. To the extent the uncertain tax positions meet the "more likely than not" threshold, the Company measures and records the highest probable benefit, and establishes appropriate reserves for benefits that exceed the amount likely to be sustained upon examination. The Company currently has not recorded any uncertain tax positions and does not anticipate that the unrecognized tax benefits will significantly increase or decrease within the next twelve months.

The Company files U.S. federal and state income tax returns with varying statute of limitations. During the year-ended December 31, 2020, examinations by U.S. tax authorities were completed for 2017 and 2018. Due to the Company's net operating loss carryforwards, federal income tax returns from incorporation are still subject to examination. The Company files in several state tax jurisdictions and is subject to examination in years ranging from incorporation to 2021.

12. Employee Savings Plan

The Company has a 401(k) savings plan that allows participating employees to contribute a portion of their salary, subject to annual limits and minimum qualifications. The Board may, at its sole discretion, approve Company matching contributions to the plan. The Company made contributions of $1.0 million, $0.8 million and $0.7 million for the years ended December 31, 2021, 2020 and 2019, respectively.

13. NexoBrid License and Supply Agreements

On May 6, 2019, the Company entered into exclusive license and supply agreements with MediWound to commercialize NexoBrid and any improvements to NexoBrid in North America. NexoBrid is a topically-administered biological product that enzymatically removes nonviable burn tissue, or eschar, in patients with deep partial and full-thickness thermal burns. On September 16, 2020, the Company announced acceptance of MediWound's submission of a biologics license application ("BLA") for review by the U.S. Food and Drug Administration ("FDA") to seek marketing approval for NexoBrid in the U.S. for the treatment of severe burns, and the FDA's assignment of a Prescription Drug User Fee Act ("PDUFA") target date for the product of June 29, 2021. Subsequently, on June 29, 2021, the Company announced that MediWound received a complete response letter from the FDA regarding the BLA, through which the FDA communicated to MediWound that it had completed its review of the BLA, as amended, and had determined that it cannot approve the BLA in its present form. The Company continues to work with MediWound, BARDA and the FDA to address the issues identified in the agency's complete response letter, to prepare and submit a BLA resubmission to the FDA and to seek the potential approval of NexoBrid.

Pursuant to the terms of the license agreement, if the BLA is approved, MediWound will transfer the BLA to Vericel and Vericel will market NexoBrid in the U.S. Both MediWound and Vericel, under the supervision of a Central Steering Committee comprised of members of both companies will continue to guide the development of NexoBrid in North America. NexoBrid is approved in the European Union and other international markets and has been designated as an orphan biologic in the U.S., European Union and other international markets.

In May 2019, the Company paid MediWound $17.5 million in consideration for the license, which was recorded as research and development expense during 2019. The Company is also obligated to pay MediWound $7.5 million, which is contingent upon U.S. regulatory approval of the BLA for NexoBrid and up to $125.0 million contingent upon meeting certain sales milestones. The first sales milestone of $7.5 million would be triggered when annual net sales of NexoBrid or improvements to it in North America exceed $75.0 million. As of December 31, 2021, the milestone payments are not yet probable and therefore, not considered a liability. The Company also will pay MediWound tiered royalties on net sales ranging from mid-high single-digit to mid-teen percentages, subject to customary reductions. The Company also entered into a supply agreement with MediWound, under which MediWound will manufacture NexoBrid for the Company on a unit price basis which may be increased based on a published index. MediWound is obligated to supply the Company with NexoBrid for sale in North America on an exclusive basis for the first five years of the term of the supply agreement. After the exclusivity period or upon supply failure, the Company will be permitted to establish an alternate source of supply.

BARDA has committed to procure NexoBrid directly from MediWound under an emergency use authorization, and under such commitment the Company will receive a percentage of gross profit for sales directly to BARDA. If BARDA procures NexoBrid directly from Vericel, the Company will pay a percentage of gross profits to MediWound on initial committed amounts and a royalty on any additional BARDA purchases of NexoBrid beyond the initial committed amount. As of December 31, 2021, the Company does not hold a direct contract or distribution agreement with BARDA.

14. Commitments and Contingencies

Manufacturing and Supply Agreements

Matricel — In October 2015, the Company signed a long-term supply agreement with Matricel GmbH ("Matricel") for the ACI-Maix collagen membrane used in the manufacture of MACI. The Company and Matricel amended the agreement on March 17, 2018. Under the agreement, the Company has committed to purchase annually approximately $0.6 million per year. The Company has fulfilled this commitment for each of the years ended December 31, 2021, 2020 and 2019, respectively. The

agreement is effective until December 31, 2022 and contains a 5-year renewal option by the Company and an additional 5-year automatic renewal, unless otherwise terminated.

Manufacture, Supply and Other Agreements — The Company has entered into various agreements relating to the manufacture of its products and the supply of certain components. If the manufacturing or supply agreements expire or are otherwise terminated, the Company may not be able to identify and obtain ancillary materials that are necessary to develop its products and such expiration and termination could have a material effect on the Company's business.

The Company's purchase commitments consist of minimum purchase amounts of materials used in the Company's cell manufacturing process to manufacture its marketed cell therapy products. In addition, the Company also pays for usage of an offsite warehouse space. In February 2021, the terms of the warehouse operating agreement were extended through March 31, 2027.

Future minimum purchase commitments related to the Company's contractual obligations are as follows:

		Payments Due by Period					
Contractual Obligations (In thousands)	**Total**	**2022**	**2023**	**2024**	**2025**	**2026**	**More than 5 Years**
Purchase commitments	$ 10,135	$ 9,254	$ 881	$ —	$ —	$ —	$ —
Warehouse operating agreement	8,341	1,445	1,513	1,432	1,512	1,601	838
Total	$ 18,476	$ 10,699	$ 2,394	$ 1,432	$ 1,512	$ 1,601	$ 838

15. Subsequent Events

On January 28, 2022, the Company entered into a Lease Agreement (the "Lease") to lease approximately 126,000 square feet of to-be-constructed manufacturing, laboratory and office space in Burlington, Massachusetts (the "Premises"). Once constructed, the Premises will serve as the Company's new corporate headquarters and primary manufacturing facility.

The term of the Lease is scheduled to begin 12 months following the landlord's commencement of construction of the core and shell of the building in which the Premises are located, which is currently expected to be February 28, 2023 (the "Commencement Date"). The Company's obligation to pay rent for the Premises will begin on the earlier of: 13 months from the Commencement Date; or the date on which the Company first occupies the Premises to conduct operations (the "Rent Commencement Date"). The initial term of the Lease is 144 months following the Rent Commencement Date. The Company has a one-time option to extend the term of the Lease for an additional 10 years, exercisable under certain conditions and at a market rate determined in accordance with the Lease.

The annual base rent of the Lease is initially $57 per square foot per year, subject to annual increases of 2.5%. Monthly contractual payments are expected to range from $0.6 million to $0.8 million. Additionally, the Company is responsible for reimbursing the landlord for the Company's share of the Premises' property taxes and certain other operating expenses. The Lease also provides for a tenant improvement allowance from the landlord in an amount equal to $200 per square foot of the Premises, or approximately $25.1 million, towards the design and construction of certain tenant improvements made to the Premises, subject to the terms set forth in the Lease.

In January 2022, in connection with the execution of this Lease, the Company issued a letter of credit collateralized by cash deposits of approximately $6.0 million. Such letter of credit shall be reduced to approximately $4.2 million and $1.8 million at the conclusion of the third and sixth Lease years, respectively, provided certain conditions set forth in the Lease are satisfied.

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

Management of the Company, with the participation of the Company's Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), has evaluated the effectiveness of the Company's disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Securities and Exchange Act of 1934, as amended (the "Exchange Act"). Based on that evaluation, the Company's CEO and CFO (its "Certifying Officers") concluded that the Company's disclosure controls and procedures (as defined in the Exchange Act Rules 13a-15(e) and 15d-15(e)) were effective as of the period covered by this report.

Management's Report on Internal Control over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Our internal control over financial reporting is a process designed under the supervision of our CEO and CFO to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external purposes in accordance with generally accepted accounting principles.

Management of the Company evaluated the effectiveness of our internal control over financial reporting using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control - Integrated Framework* (2013). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2021.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2021 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as attested to in their report which appears in Item 8 of this Form 10-K.

Changes in Internal Control over Financial Reporting

During the three months ended December 31, 2021, there were no material changes made in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act).

Due to the ongoing COVID-19 pandemic, a number of employees and consultants have been working remotely, either part-or full-time. The design of processes, systems, and controls allows for remote execution with accessibility to secure data. The Company is continually monitoring and assessing the evolution and severity of the pandemic to determine any potential impact on the design and operating effectiveness of its internal controls over financial reporting.

Item 9B. ***Other Information***

Not applicable.

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

Not applicable.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required by this item (other than the information set forth in the next paragraph in this Item 10) will be included in our Definitive Proxy Statement with respect to our 2022 Annual Meeting of Shareholders to be filed with the SEC no later than 120 days after the close of our year ended December 31, 2021, and is incorporated herein by reference.

Pursuant to Section 406 of the Sarbanes-Oxley Act of 2002, the Company has adopted a code of business conduct and ethics that applies to our officers, directors, and employees. The full text of our code of business conduct and ethics can be found on our website (http://www.vcel.com) under the "Corporate Governance" heading on the "Investor Relations" page. The information on our web site is not part of, and is not incorporated into, this Annual Report on Form 10-K. The Company may satisfy the disclosure requirements under Item 5.05 of Form 8-K regarding an amendment to, or a waiver from, a provision of our code of business conduct and ethics that applies to our CEO, CFO and other senior financial officers, or persons performing similar functions, by posting such information on our website where it is accessible through the same link noted above.

Item 11. ***Executive Compensation***

The information required with respect to this item will be incorporated herein by reference to our Definitive Proxy Statement for our 2022 Annual Meeting of Shareholders or an amendment of this report to be filed with the SEC no later than 120 days after the close of our year ended December 31, 2021.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management, and Related Shareholder Matters***

The information required with respect to this item will be incorporated herein by reference to our Definitive Proxy Statement for our 2022 Annual Meeting of Shareholders or an amendment of this report to be filed with the SEC no later than 120 days after the close of our year ended December 31, 2021.

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

The information required with respect to this item will be incorporated herein by reference to our Definitive Proxy Statement for our 2022 Annual Meeting of Shareholders or an amendment of this report to be filed with the SEC no later than 120 days after the close of our year ended December 31, 2021.

Item 14. ***Principal Accountant Fees and Services***

The information required with respect to this item will be incorporated herein by reference to our Definitive Proxy Statement for our 2022 Annual Meeting of Shareholders or an amendment of this report to be filed with the SEC no later than 120 days after the close of our year ended December 31, 2021.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

(a) The following documents are filed as part of this Annual Report on Form 10-K:

1. Consolidated Financial Statements (see Item 8).
2. All information is included in the Consolidated Financial Statements or Notes thereto.
3. Exhibits:
   See Exhibit Index.

Item 16. ***Form 10-K Summary***

None.

EXHIBIT INDEX

Exhibit No.	Description
3.1	Restated Articles of Incorporation of the Company, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on December 17, 2009, incorporated herein by reference.
3.2	Certificate of Amendment to Restated Articles of Incorporation of the Company dated February 9, 2010, filed as Exhibit 3.2 to the Company's Post-Effective Amendment No. 1 to Form S-1 filed on March 31, 2010, incorporated herein by reference.
3.3	Certificate of Amendment to Restated Articles of Incorporation of the Company dated March 22, 2011, attached as Exhibit 3.1 to the Company's Current Report on Form 8-K filed on March 25, 2011, incorporated herein by reference.
3.4	Certificate of Amendment to the Restated Articles of Incorporation of the Company, dated November 21, 2014, attached as Exhibit 3.1 to the Company's Current Report on Form 8-K filed on November 24, 2014, incorporated herein by reference.
3.5	Bylaws, as amended, attached as Exhibit 3.1 to the Company's Current Report on Form 8-K filed on November 12, 2010, incorporated herein by reference.
4.1	Description of Capital Stock (incorporated herein by reference to Exhibit 4.5 on Form 10-K filed on February 25, 2020).
10.1 #	Form of Indemnification Agreement entered into between the Company and each of its directors, attached as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 31, 2010, incorporated herein by reference.
10.2 #	Senior Executive Incentive Bonus Plan (incorporated herein by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K, filed on March 25, 2011).
10.3 #	Executive Employment Agreement, executed March 4, 2013 and effective March 1, 2013, by and between the Company and Dominick C. Colangelo (incorporated herein by reference to Exhibit 10.1 to the Company's Report on Form 8-K, filed on March 8, 2013).
10.4	Asset Purchase Agreement, dated as of April 19, 2014, by and between the Company and Sanofi (incorporated herein by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on April 23, 2014).
10.5 #	Second Amended and Restated 2009 Omnibus Incentive Plan (previously filed as Appendix II to the Company's definitive proxy statement on Schedule 14A, filed on October 21, 2014 and incorporated herein by reference).
10.6	Lease Agreement, dated November 30, 2005, by and between the Company and Up 64 Sidney Street, LLC, as amended (incorporated herein by reference as Exhibit 10.57 to the Company's Annual Report on Form 10-K, filed March 14, 2016).
10.7	Lease Agreement, dated October 21, 2020 by and between the Company and Up 64 Sidney Street, LLC, as amended, (incorporated herein by reference as Exhibit 10.7 to the Company's Annual Report on Form 10-K, filed February 24, 2021).
10.8	Vericel Corporation 2015 Employee Stock Purchase Plan (incorporated herein by reference to Appendix I of the Company's Proxy Statement on Schedule 14A for the fiscal year ended December 31, 2014, filed on March 25, 2015).

Exhibit No.	Description
10.9 †	Distribution Agreement by and between Orsini Pharmaceutical Services, Inc. and the Company, dated May 15, 2017 (incorporated herein by reference to Exhibit 10.1 on Form 8-K/A filed June 2, 2017).
10.10 #	First Amendment to Executive Employment Agreement by and between Dominick C. Colangelo and the Company, dated September 14, 2017 (incorporated herein by reference to Exhibit 10.1 on Form 8-K filed September 19, 2017).
10.11	First Amendment to Distribution Agreement between Orsini Pharmaceutical Services, Inc. and the Company, dated August 10, 2017 (incorporated herein by reference to Exhibit 10.8 on Form 10-Q filed November 7, 2017).
10.12 †	Second Amendment to Distribution Agreement between Orsini Pharmaceutical Services, Inc. and the Company, dated October 13, 2017 (incorporated herein by reference to Exhibit 10.56 on Form 10-K filed March 8, 2018).
10.13 †	Third Amendment to Distribution Agreement between Orsini Pharmaceutical Services, Inc. and the Company, dated November 14, 2017 (incorporated herein by reference to Exhibit 10.57 on Form 10-K filed March 8, 2018).
10.14 †	Fourth Amendment to Distribution Agreement between Orsini Pharmaceutical Services, Inc. and the Company, dated July 25, 2018 (incorporated herein by reference to Exhibit 10.1 on Form 10-Q filed November 6, 2018).
10.15 †	Dispensing Agreement by and between AllCare Plus Pharmacy and the Company, dated July 26, 2018 (incorporated herein by reference to Exhibit 10.2 on Form 10-Q, filed November 6, 2018).
10.16 †	Fifth Amendment to Distribution Agreement between Orsini Pharmaceutical Services, Inc. and the Company, dated October 18, 2018 (incorporated herein by reference to Exhibit 10.3 on Form 10-Q filed November 6, 2018).
10.17 #	Amended and Restated Non-Employee Director Compensation Guidelines (incorporated herein by reference to Exhibit 32.3 on Form 10-Q filed August 4, 2021).
10.18 †	Amended and Restated ACI-Maix Supply Agreement, dated March 17, 2018, as amended, by and between the Company and Matricel GMBH (incorporated herein by reference to Exhibit 10.1 on Form 10-Q filed May 8, 2018).
10.19 #	2017 Omnibus Incentive Plan (previously filed as Appendix I to the Company's definitive proxy statement on Schedule 14A, filed March 20, 2017 and incorporated herein by reference).
10.20 #	Form of New Hire Incentive Stock Option Agreement under the 2017 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.48 on Form 10-K filed February 26, 2019).
10.21 #	Form of Incentive Stock Option Award Agreement under the 2017 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.49 on Form 10-K filed February 26, 2019).
10.22 #	Form of Non-Employee Director Award Agreement under the 2017 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.50 on Form 10-K filed February 26, 2019).
10.23 #	Form of Restricted Stock Unit Award Agreement under the 2017 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.51 on Form 10-K filed February 26, 2019).

Exhibit No.	Description
10.24 #	Vericel Corporation Amended and Restated 2019 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.1 on Form 8-K filed May 1, 2020).
10.25 #	Form of Amended and Restated Incentive Stock Option Agreement for Employees under the 2019 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.31 on the Company's Annual Report on Form 10-K, filed February 24, 2021).
10.26 #	Form of Incentive Stock Option Agreement for New Hires under the Amended and Restated 2019 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.32 on the Company's Annual Report on Form 10-K, filed February 24, 2021).
10.27 #	Form of Amended and Restated Non-Qualified Stock Option Agreement under the 2019 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.33 on the Company's Annual Report on Form 10-K, filed February 24, 2021).
10.28 #	Form of Amended and Restated Restricted Stock Unit Award Agreement for Employees under the 2019 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.34 on the Company's Annual Report on Form 10-K, filed February 24, 2021).
10.29 #	Form of Restricted Stock Unit Award Agreement for Non-employee Directors under the 2019 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.35 on the Company's Annual Report on Form 10-K, filed February 24, 2021).
10.30	Sixth Amendment to Distribution Agreement between Orsini Pharmaceutical Services, Inc. and the Company, dated April 18, 2019 (incorporated herein by reference to Exhibit 10.1 on Form 10-Q filed August 6, 2019).
10.31 †	First Amendment to Dispensing Agreement by and between AllCare Plus Pharmacy and the Company, dated May 1, 2019 (incorporated herein by reference to Exhibit 10.2 on Form 10-Q, filed August 6, 2019)
10.32 †	License Agreement between the Company and MediWound LTD., dated May 6, 2019 (incorporated herein by reference to Exhibit 10.9 on Form 10-Q filed August 6, 2019).
10.33 †	Supply Agreement between the Company and MediWound LTD., dated May 6, 2019 (incorporated herein by reference to Exhibit 10.10 on Form 10-Q filed August 6, 2019).
10.34 #	Amended and Restated Employment Agreement by and between Michael Halpin and the Company, dated September 14, 2017 (incorporated herein by reference to Exhibit 10.11 on Form 10-Q filed August 6, 2019).
10.35 #	First Amendment to Executive Employment Agreement, executed and effective June 3, 2019, by and between the Company and Michael Halpin (incorporated herein by reference to Exhibit 10.12 on Form 10-Q, filed August 6, 2019).
10.36 #	Employment Agreement, dated January 25, 2021, by and between the Company and Joseph Mara (incorporated herein by reference to Exhibit 10.1 on Form 8-K filed January 25,2021).
10.37 #	Employment Agreement, dated November 4, 2019 by and between the Company and Sean Flynn (incorporated herein by reference to Exhibit 10.43 on the Company's Annual Report on Form 10-K filed February 24, 2021).

Exhibit No.	Description
10.38 #	Employment Agreement, dated August 20, 2018 by and between the Company and Dr. Jonathan M. Hopper (incorporated herein by reference to Exhibit 10.44 on the Company's Annual Report on Form 10-K filed February 24, 2021).
10.39 #	Consulting Agreement, dated July 2, 2021, by and between the Company and Sandra Pennell (incorporated herein by reference to Exhibit 32.4 on Form 10-Q filed August 4, 2021).
10.40	Second Amendment to the Dispensing Agreement between AllCare Plus Pharmacy, Inc. and the Company, dated September 20th, 2021 (incorporated herein by reference to Exhibit 32.3 on Form 10-Q filed November 9, 2021).
10.41	Seventh Amendment to the Distribution Agreement between Orsini Pharmaceutical Services, Inc. and the Company, dated October 1, 2021 (incorporated herein by reference to Exhibit 32.4 on Form 10-Q filed November 9, 2021).
21.1**	Subsidiaries of Registrant.
23.1**	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.
31.1**	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2**	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS**	Inline XBRL Instance Document
101.SCH**	Inline XBRL Taxonomy Extension Schema Document
101.CAL**	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB**	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE**	Inline XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF**	Inline XBRL Taxonomy Extension Definition Linkbase Document
104**	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

Management contract or compensatory plan or arrangement covering executive officers or directors of Vericel.
† Confidential treatment status has been granted as to certain portions thereto, which portions are omitted and filed separately with the Securities and Exchange Commission.
* Furnished herewith.
** Filed herewith.

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.

Date: February 24, 2022

Vericel Corporation

/s/ DOMINICK C. COLANGELO
Dominick C. Colangelo
President and Chief Executive Officer
(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed on behalf of the registrant on February 24, 2022 by the following persons in the capacities indicated.

Signature	Title
/s/ DOMINICK C. COLANGELO Dominick C. Colangelo	*President and Chief Executive Officer, Director* *(Principal Executive Officer)*
/s/ JOSEPH A. MARA Joseph A. Mara	*Chief Financial Officer* *(Principal Financial Officer)*
/s/ JONATHAN D. SIEGAL Jonathan D. Siegal	*Vice President and Corporate Controller* *(Principal Accounting Officer)*
/s/ ROBERT L. ZERBE, M.D. Robert L. Zerbe, M.D.	*Chairman of the Board of Directors*
/s/ ALAN L. RUBINO Alan L. Rubino	*Director*
/s/ HEIDI M. HAGEN Heidi M. Hagen	*Director*
/s/ STEVEN C. GILMAN Steven C. Gilman	*Director*
/s/ KEVIN F. MCLAUGHLIN Kevin F. McLaughlin	*Director*
/s/ PAUL K. WOTTON Paul K. Wotton	*Director*
/s/ LISA WRIGHT Lisa Wright	*Director*

Exhibit 21.1

SUBSIDIARIES OF REGISTRANT

Marrow Donation, LLC, a California limited liability company

Vericel Denmark ApS, a Danish private limited company

Vericel Security Corporation, a Massachusetts corporation

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-259119) and Form S-8 (Nos. 333-241700, 333-217741, 333-205338, 333-187346, 333-174758, 333-163832, 333-140624, 333-121006, and 333-231163) of Vericel Corporation of our report dated February 24, 2022 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

February 24, 2022

EXHIBIT 31.1

CERTIFICATION

I, Dominick C. Colangelo, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vericel Corporation for the year ended December 31, 2021;

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.

/s/ DOMINICK C. COLANGELO
Dominick C. Colangelo
President and Chief Executive Officer
(Principal Executive Officer)

Date: February 24, 2022

EXHIBIT 31.2

CERTIFICATION

I, Joseph Mara, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vericel Corporation for the year ended December 31, 2021;

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.

/s/ JOSEPH MARA

Joseph Mara

Chief Financial Officer

(Principal Financial Officer)

Date: February 24, 2022

EXHIBIT 32.1

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 of Vericel Corporation (Company) on Form 10-K for the year ended December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (Report), each of the undersigned officers of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Section 906), the following:

(1) The Report fully complies with the requirements of section 13(a) and 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ DOMINICK C. COLANGELO
Dominick C. Colangelo
President and Chief Executive Officer
(Principal Executive Officer)

/s/ JOSEPH MARA
Joseph Mara
Chief Financial Officer
(Principal Financial Officer)

Date: February 24, 2022

A signed original of this written statement required by Section 906 has been provided to Vericel Corporation and will be retained by Vericel Corporation and furnished to the Securities and Exchange Commission or its staff upon request.