EMMAUS LIFE SCIENCES, INC.

FORM 10-K
(Annual Report)

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UNITED STATES
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, 2024

OR

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

For the transition period from to

Commission File Number: 001-35527

Emmaus Life Sciences, Inc.

(Exact name of Registrant as specified in its charter)

Delaware	**2834**	**87-0419387**
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

21250 Hawthorne Boulevard, Suite 800, Torrance, California 90503
(Address of principal executive offices, including zip code)

(310) 214-0065
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
None		

Securities Registered Pursuant to Section 12(g) of the Act:

Title of class
Common stock, par value $0.001 per share

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

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

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

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

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

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

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

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

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

The aggregate market value of shares of common stock held by non-affiliates of the registrant as of June 30, 2024, the last business day of the registrant's most recently completed second fiscal quarter, was $4,075,413 based upon the closing price of the common stock as reported on the OTCQB.

There were 63,865,571 shares of common stock outstanding as of March 25, 2025.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report contains some statements that are not purely historical and that are considered "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, which we refer to as the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, which we refer to as the Exchange Act. Such forward-looking statements express our management's expectations, beliefs, and intentions regarding the future. The words "anticipates," "believes," "continue," "could," "estimates," "expects," "intends," "may," "might," "plans," "possible," "potential," "predicts," "projects," "seeks," "should," "will," "would" and similar expressions and variations, or comparable terminology, or the negatives of any of the foregoing, may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking.

The forward-looking statements contained in this Annual Report are based on current expectations and beliefs concerning future developments that are difficult to predict. We cannot guarantee future performance, or that future developments affecting our company will be those currently anticipated. These forward-looking statements involve risks, uncertainties (some of which are beyond our control) or assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements, including the factors referenced in this Annual Report under the sections entitled "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

All forward-looking statements attributable to us are expressly qualified in their entirety by these risks and uncertainties, and you should not place undue reliance on any forward-looking statement. We undertake no obligation to update or revise any forward-looking statement, except as may be required under applicable securities laws.

RISK FACTOR SUMMARY

Following is a summary of certain material risks and uncertainties facing our business. This summary is not a complete discussion of the risks and uncertainties affecting us. A more complete discussion of these and other risks and uncertainties is set forth under "Risk Factors" in Part I, Item 1A of this Annual Report. Additional risks not presently known to us or that we presently deem immaterial may also affect us. If any of these risks occur, our business, financial condition or results of operations could be materially and adversely affected.

Risks Related to Our Business

We have operated at a loss and may continue to operate at a loss for the foreseeable future.

We are dependent on restructuring or refinancing our existing indebtedness and on new financing to sustain our operations, and there is substantial doubt regarding our ability to continue as a going concern.

We are dependent on the commercial success of our only approved product, Endari®.

The marketing exclusivity for Endari® for sickle cell disease ("SCD") in the U.S. expired in July 2024 and Endari® has no or limited market exclusivity in the Middle East North Africa ("MENA") region, which lack of exclusivity could adversely affect our Endari® sales and results of operations in the U.S.. and in the MENA region.

A variety of risks associated with marketing Endari® internationally could hurt our business.

If the single manufacturer of prescription-grade L-glutamine or, as happened in 2024 the single packager upon which we rely for our finished goods inventory of Endari®, fails to produce in the volumes and quality that we require on a timely basis, or fails to comply with stringent regulations applicable to pharmaceutical manufacturers, we may face interruptions in sales of, or be unable to meet demand for, Endari® and may lose potential revenues.

We have identified material weaknesses in our internal controls over financial reporting and governance matters.

Risks Related to Regulatory Oversight of Our Business and Compliance with Law

If we fail to comply with federal and state healthcare laws, including fraud and abuse and health information privacy and security laws, we could face substantial penalties and our business, results of operations, financial condition and prospects could be adversely affected.

Risks Related to Our Investment in EJ Holdings, Inc.

EJ Holdings has no revenues and we have ceased funding its business and operations, and there is no assurance that EJ Holdings will be able to obtain needed financing to continue its activities.

We have disposed of our former equity interest in EJ Holdings, which may increase the risk that our loans to EJ Holdings will not be repaid.

If EJ Holdings fails to reactivate its plant and obtain customers, it may not be able to sell its plant and property and repay some or all our loans.

Risks Related to Our Securities

We have been delinquent in our past SEC reporting obligations, and if we fail to timely file our future SEC reports, our security holders and prospective investors will not have current information regarding our financial statements and status of our business and operations and our common stock may no longer be eligible for quotation on the OTC Markets Group, Inc.

Trading on the OTC Markets is volatile and sporadic, which could depress the market price of our common stock and make it difficult for our investors and stockholders to buy or resell our common stock.

Our outstanding warrants and convertible promissory notes may result in substantial dilution to our stockholders.

Stockholders also may experience dilution from future financings.

Our common stock is not traded on a national securities exchange, which may adversely affect our ability to raise needed financing.

PART I

ITEM 1. BUSINESS

In this Annual Report, the terms, "we," "us," "our" or the "Company" refer to Emmaus Life Sciences, Inc., and its subsidiaries.

Overview

Endari®

We are a commercial-stage biopharmaceutical company engaged in the discovery, development, marketing and sale of innovative treatments and therapies, primarily for rare and orphan diseases. Our only product, Endari® (prescription grade L-glutamine oral powder) is approved by the U.S. Food and Drug Administration, or FDA, to reduce the acute complications of sickle cell disease ("SCD") in adult and pediatric patients five years of age and older. In April 2022, Endari® was approved by the Ministry of Health and Prevention in the United Arab Emirates, or U.A.E, in adults and pediatric patients five years of age and older. In November and December of 2022, we received marketing authorizations for Endari® in Qatar and Kuwait, respectively. In May 2023, we received approval for marketing of Endari to treat SCD from the Bahrain National Health Regulatory Authority. In July 2023, we received marketing approval for Endari® in Oman. Application for marketing authorization in Saudi Arabia is pending. While the application is pending, the FDA approval of Endari® can be referenced to allow access to Endari® on a named-patient basis.

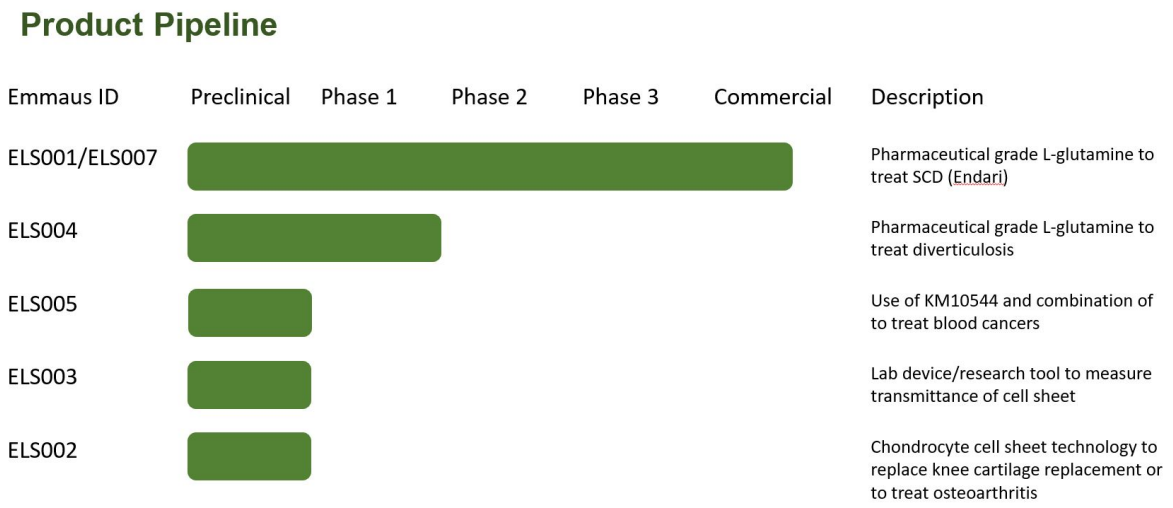
Endari® is sold in the U.S. through our nonexclusive distributors. Until August 2024, Endari® was marketed and sold in the U.S. by our internal commercial sales team. In August 2024, we reduced our internal sales team and in October terminated the employment of our Chief Commercialization Officer. Endari® is reimbursable by the Centers for Medicare and Medicaid Services, and every state provides coverage for Endari® for outpatient prescriptions to all eligible Medicaid enrollees within their state Medicaid programs. Endari® is also reimbursable by many commercial payors. We have agreements in place with the nation's leading distributors, as well as physician group purchasing organizations and pharmacy benefits managers, making Endari® available at selected retail and specialty pharmacies nationwide.

SCD is a rare, debilitating and lifelong hereditary blood disorder that affects approximately 100,000 patients in the U.S. and up to 25 million patients worldwide, the majority of which are of African descent. Approximately one in every 365 African-American children are born with SCD. The FDA's approval of Endari® was based upon the results of a 48-week randomized, double-blind, placebo-controlled, multi-center Phase 3 clinical trial evaluating the effects of Endari®, as compared to placebo in 230 adults and children with SCD. The results demonstrated that Endari® reduced the frequency of sickle cell crises by 25% and hospitalizations by 33%. Additional findings included a 41% decrease in cumulative hospital days and greater than 60% fewer incidents of acute chest syndrome in patients treated with Endari®. The FDA has acknowledged that the clinical benefit of Endari® was observed irrespective of hydroxyurea use, which supports the use of Endari® as a monotherapy or in combination with hydroxyurea as safe and effective treatment options for patients with SCD.

The safety of Endari® was based upon data from 298 patients, 187 treated with Endari® and 111 patients treated with placebo in Phase 2 and Phase 3 studies. Endari®'s safety profile was similar to the placebo and Endari® was well-tolerated in pediatric and adult patients alike. The most common adverse reactions, occurring in more than 10% of patients treated with Endari®, were constipation, nausea, headache, abdominal pain, cough, pain in extremity, back pain, and chest pain (non-cardiac).

Product Pipeline

The following table and discussion summarizes our product pipeline. As previously reported, however, we have suspended substantially all research and development activities to reduce operating expenses while we seek to restructure or refinance out existing indebtedness, and we cannot predict whether or when we will be able to resume such activities.



Diverticulosis

On July 4, 2018, the FDA acknowledged receipt of our investigational new drug application, or IND, for the treatment of diverticulosis using the same prescription grade L-glutamine oral powder ("PGLG") used for Endari® (L-glutamine oral powder). We subsequently received a "Study May Proceed" letter from the FDA. In April 2019, we commenced a Pilot/Phase 1 study of the safety and efficacy of PGLG oral powder in diverticulosis. The study evaluated the change in the number and size of colonic diverticula and assessed safety in a total of 10 evaluable patients at multiple study sites.

The last patient visit for the pilot study was in November 2021. The data obtained after 12 months of treatment with L-glutamine was inconclusive, so we initiated a sub-study in June 2021, through an amendment to the original IND protocol. The sub-study standardized data collection and recording using video capture to support the accurate assessment of any changes in the sigmoid colon, the most frequent site for diverticulosis, as well as diverticulitis, a more severe manifestation of diverticulosis. The objective of the sub-study was to provide additional safety and efficacy data to support further clinical development. The sub-study colonoscopy procedures were assessed by a central medical monitor as well as the treating investigator. For the sub-study, at least five patients were administered oral L-glutamine 15g BID over six months. The data from the sub-study, which was completed in July 2022, also was inconclusive. There were no safety concerns reported in either the Pilot/Phase 1 or the sub-study.

We may determine to undertake further investigation of the effectiveness of PGLG in patients with a history of diverticulitis but have no current plan to do so.

Oncology Project

On October 7, 2021, we entered into a License Agreement with Kainos Medicine, Inc., a South Korean corporation ("Kainos"), under which Kainos has granted us an exclusive license in the territory encompassing the U.S., the U.K. and the EU to patent rights, know-how and other intellectual property relating to Kainos's novel IRAK4 inhibitor, referred to as KM10544, for the treatment of cancers, including leukemia, lymphoma, and solid tumor cancers. Although we achieved positive results in pre-clinical studies, we have suspended further studies of KM10544 and other research and development activities unrelated to commercialization and sale and possible reformulation of Endari®.

Chondrocyte Cell Sheet Technology

We have developed chondrocyte and osteoblast cell sheets using human mesenchymal stem cells and previously conducted pre-clinical studies to assess the potential of the cell sheets to articular cartilage injury, osteoarthritis and other cartilage-related conditions and bone diseases such as osteoarthritis, nonunion and Paget's disease. A cell sheet is a composite of cells grown and harvested in an intact sheet, like rather than as individual cells, and can be used for tissue transplantation or to engineer complex multilayer cell sheets composed of different types of cells like a bandage. Our cell sheets offer several potential advantages over existing treatment options, including reduced chemical toxins and xeno-products needed during cell sheet generation, easier and more convenient cell coverage of the injured tissue (transplantation on the damaged area), and allogeneic (*i.e.,* use of stem cells from one individual in another individual) transplantation. We have suspended any further pre-clinical studies pending the availability of sufficient funding.

Device Measuring Cell Sheets Transparency

We also have developed a device for measuring the maturity of biological cell cultures for harvesting of cell sheets, as well as the number cells and the cell sheet transparency, in one or more cell sheets of the biological cell cultures. This semi-automatic device is a potentially essential tool for quality control in the growing field of cell sheet translational medicine. The potential application of this device includes assessment of the transparency of donor's cornea before transplantation. Currently, there is no objective method to assess the timing for cell sheet harvesting and to assess the donor's cornea transparency for corneal transplantation. We have filed a patent application in the U.S. for this technology and may seek a potential partner to develop or commercialize the device.

Summary of Pipelines Products

The development of our potential anti-cancer treatments, cell sheet technologies including chondrocyte cell sheets for treating cartilage and bone related conditions and CAOMECS for treating corneal and other diseases are in the very early stages.

Recent Developments

In January 2025, Endari® was afforded market exclusivity in the Kingdom of Saudi Arabia, or KSA, by the National Unified Procurement Agency, or NUPCO, KSA's unified purchasing system which extends to all KSA government institutions, including hospitals under the Ministry of Health, Military Hospitals, the National Guard, the Security Forces, and King Faisal Specialty Hospitals and Research Centers.

Sickle Cell Disease—Market Overview

Sickle cell disease ("SCD") is a genetic blood disorder that affects 20 million - 25 million people worldwide and occurs with increasing frequency among those whose ancestors are from regions including sub-Saharan Africa, South America, the Caribbean, Central America, the Middle East, India and Mediterranean regions such as Turkey, Greece and Italy. The U.S. Centers for Disease Control and Prevention estimates that there are as many as 100,000 people with SCD in the United States, and we estimate there are approximately 80,000 SCD sufferers in the EU. We estimate that there are over 100,000 SCD patients that could potentially be treated in the Persian Gulf States, as well as patients in other countries that comprise the Middle East and North Africa ("MENA") region.

SCD is characterized by the production of an altered form of hemoglobin which polymerizes and becomes fibrous, causing the red blood cells of patients with SCD to become sickle-shaped, inflexible and adhesive rather than round, smooth and flexible. These changes also lead to increased oxidant stress and much damage to the membrane of red blood cells. It also causes increased adhesiveness of red blood cells. The complications associated with SCD occur when these inflexible and sticky cells block, or occlude, small blood vessels, which can then cause severe and chronic pain throughout the body due to insufficient oxygen being delivered to tissue, or ischemia, and inflammation. According to an article in Annals of Internal Medicine, "*In the Clinic: Sickle Cell Disease*" by M.H. Steinberg (September 2011), which we refer to as the Steinberg Article, this leads to long-term organ damage, diminished exercise tolerance, increased risk of stroke and infection and decreased lifespan.

Sickle cell crisis, a broad term covering a range of disorders, is one of the most devastating complications of SCD. Types of sickle cell crisis include:

- *Vaso-occlusive crisis*, characterized by obstructed blood flow to organs such as the bones, liver, kidneys, eyes or central nervous system;
- *Aplastic crisis*, characterized by acute anemia typically due to viral infection;
- *Hemolytic crisis*, characterized by accelerated red blood cell death and reduced hemoglobin;
- *Splenic sequestration crisis*, characterized by painful enlargement of the spleen due to trapped red blood cells; and
- *Acute chest syndrome*, a potentially life-threatening obstruction of blood supply to the lungs characterized by fever, chest pain, cough, and lung infiltrates.

According to the Steinberg Article referred to above, acute chest syndrome affects more than half of all patients with SCD and is a common reason for hospitalization. Other symptoms and complications of SCD include swelling of the hands and feet, infections, pneumonia, vision loss, leg ulcers, gall stones and stroke.

A crisis is characterized by excruciating musculoskeletal pain, visceral pain and pain in other locations. These crises occur periodically throughout the life of a person with SCD. In adults, the acute pain typically persists for five or ten days or longer, followed by a dull, aching pain generally ending only after several weeks and sometimes persisting between crises. According to the Steinberg Article, the frequency of sickle cell crises varies within patients with SCD from rare occurrences to occurrences several times a month. The frequency of crises tends to increase late in the second decade of life and to decrease after the fourth decade.

Treatment of sickle cell crises is burdensome and expensive for patients and payors, as it encompasses costs for hospitalization, urgent care and emergency room visits and prescription pain medication. Endari® enhances nicotinamide adenine dinucleotide ("NAD") synthesis to reduce excessive oxidative stress in sickle red blood cells, which is the cause of much of the damage leading to characteristic symptoms of SCD. We believe that Endari®, when taken daily, will decrease the incidence of sickle cell crisis by restoring the flexibility, fluidity and function of red blood cells in patients with SCD. We believe that regular use of Endari® also will reduce the number of costly hospitalizations of patients with SCD, as well as unexpected urgent care and emergency room visits.

Limitations of the Current Standard of Care

Prior to the approval of Endari®, the only other FDA approved pharmaceutical targeting sickle cell crisis was hydroxyurea, which is available in both generic and branded formulations. Hydroxyurea, a drug originally developed as an anticancer chemotherapeutic agent, has been approved as a once-daily oral treatment for reducing the frequency of sickle cell crisis and the need for blood transfusions in adult patients with recurrent moderate to severe sickle cell crisis. In December 2017, the FDA granted Addmedica a regular approval for hydroxyurea (Siklos) to reduce the frequency of painful crises and the need for blood transfusions in pediatric patients two years of age and older with sickle cell anemia with recurrent moderate to severe painful crises. While hydroxyurea has been shown to reduce the frequency of sickle cell crisis in some patient groups, it is not suitable for many patients due to significant toxicities and side effects. In particular, hydroxyurea can cause a severe decrease in the number of blood cells in a patient's bone marrow, which may increase the risk that the patient will develop a serious infection or bleeding, or that the patient will develop certain cancers. Another potential treatment option for SCD, bone marrow transplant, is limited in its use due to the lack of availability of matched donors and the risk of serious complications, including graft versus host disease, infection and potentially death, as well as by its high cost.

Two new treatments for sickle cell disease were approved by the FDA at the end of 2019. Crizanlizumab, marketed under the brand name of Adakveo® by Novartis AG, is a humanized monoclonal antibody that binds to P-selectin. It is approved by the FDA to reduce the frequency of vaso-occlusive crises in adults and pediatric patients aged 16 years and older with SCD. It is administered intravenously in two loading doses two weeks apart and every four weeks thereafter. Voxelotor, marketed under the brand name of Oxbryta™ by Pfizer Inc., is an HbS polymerization inhibitor that reversibly binds to hemoglobin to stabilize the oxygenated hemoglobin state, thus shifting the oxyhemoglobin dissociation curve. Oxbryta™ is approved by the FDA for the treatment of SCD in adults and pediatric patients 12 years of age and older. In December 2021, the FDA granted accelerated approval for Oxbryta to treat SCD in pediatric patients aged 4 to less than 12 years. In September 2024, Pfizer announced the withdrawal of Oxbryta™ from national and global markets.

In December 2023, the FDA approved Casgevy, a groundbreaking CRISPR-based gene editing therapy from Vertex Pharmaceuticals and CRISPR Therapeutics. The FDA also approved a second treatment using conventional gene therapy, Bluebird Bio's lentiviral therapy, Lyfgenia.

Upon onset of sickle cell crisis, the current standard of care is focused on pain management, often with prescription narcotics or non-prescription oral medications taken at home. If the pain is not relieved, or if it progresses, patients may seek medical attention in a clinic or emergency department. Pain that is not controlled in these settings may require hospitalization for more potent pain medications, typically opioids administered intravenously. The patient must stay in the hospital to receive these intravenous pain medications until the sickle cell crisis resolves and the pain subsides. Other supportive measures during hospitalization may include hydration, supplemental oxygen and treatment of any concurrent infections or other conditions.

According to *Hematology in Clinical Practice*, by Robert S. Hillman et. al. (5th ed. 2011), sickle cell crisis, once it has started, almost always results in tissue damage at the affected site in the body, increasing the importance of preventative measures. While pain medications can be effective in managing pain during sickle cell crisis, they do not affect or resolve the underlying vascular occlusion, tissue ischemia or potential tissue damage. Additionally, opioid narcotics that are generally prescribed to treat pain can also lead to tissue or organ damage and resulting complications and morbidities, prolonged hospital stays and associated continuation of pain and suffering. Given the duration and frequency of sickle cell crises, addiction to these opioid narcotics is also a significant concern.

Endari®, Our Solution for SCD

We believe Endari® may provide a safe and effective means for reducing the frequency of sickle cell crises in patients with SCD and the need for costly hospital stays or treatment with highly addictive pain medications such as opioid narcotics. Published academic research has identified L-glutamine as a precursor to NAD, one of the major molecules that regulate and prevent oxidative damage in red blood cells. Several published studies have demonstrated that sickle red blood cells have a significantly increased rate of transport of L-glutamine, which appears to be driven by the cells' synthesis of NAD to protect against oxidative damage and thereby leading to further improvement in their regulation of oxidative stress. In turn this makes sickle red blood cells less adhesive to cells of the interior wall of blood vessels, which suggests that there is decreased chance of blockage of blood vessels, especially small ones. In summary, improved regulation of oxidative stress appears to lead to less obstruction or blockage of small blood vessels, thereby alleviating a major cause of the pain and other problems associated with SCD.

In December 2013, we completed a Phase 3 prospective, randomized, double blind, placebo controlled, parallel group multicenter clinical trial to measure, over a 48-week time frame, as its primary outcome, the reduction in the number of occurrences of sickle cell crises experienced by patients in the trial. All participants other than those who received placebo, including children, received up to 30 grams of Endari® daily, dissolved in liquid, split between morning and evening; the same dosage as our Phase 2 clinical trial completed in 2009. Patients were randomized to the study treatment using a 2:1 ratio of Endari® to placebo. The randomization was stratified by investigational site and hydroxyurea usage.

The clinical trial evaluated the efficacy and safety of Endari® in 230 patients (5 to 58 years of age) with sickle cell anemia or sickle β°-thalassemia who had 2 or more painful crises within 12 months prior to enrollment. Eligible patients stabilized on hydroxyurea for at least 3 months continued their therapy throughout the study. The trial excluded patients who had received blood products within 3 weeks, had renal insufficiency or uncontrolled liver disease, or were pregnant (or planning pregnancy) or lactating. Study patients received Endari® or placebo for a treatment duration of 48 weeks followed by 3 weeks of tapering.

Efficacy was demonstrated by a reduction in the number of sickle cell crises through Week 48 and prior to the start of tapering among patients that received Endari® compared to patients who received placebo. A sickle cell crisis was defined as a visit to an emergency room/medical facility for sickle cell disease-related pain which was treated with a parenterally administered narcotic or parenterally administered ketorolac. In addition, the occurrence of acute chest syndrome, priapism, and splenic sequestration were considered sickle cell crises. Treatment with Endari® also resulted in fewer hospitalizations due to sickle cell pain at Week 48, fewer cumulative days in hospital, longer time until first sickle cell crisis and a lower incidence of acute chest syndrome.

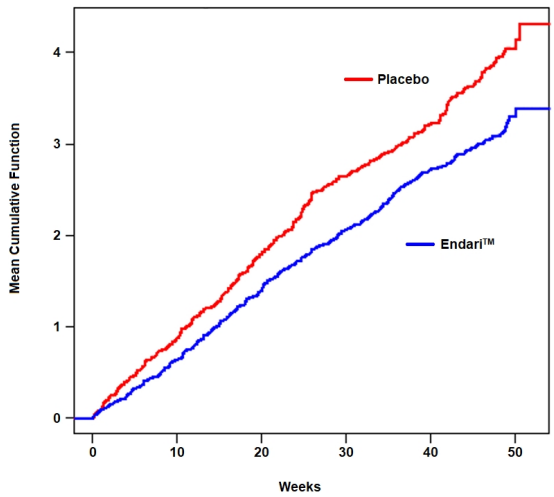
Table 1. Results from the Endari® Clinical Trial in Sickle Cell Disease

	Endari	**Placebo**
Event	**(n = 152)**	**(n = 78)**
Median number of sickle cell crises (min, max)[1]	3 (0, 15)	4 (0, 15)
Median number of hospitalizations for sickle cell pain (min, max)[1]	2 (0, 14)	3 (0, 13)
Median cumulative days hospitalized (min, max)[1,]	6.5 (0, 94)	11 (0, 187)
Median time (days) to first sickle cell crisis (95% CI) [1,2]	84 (62, 109)	54 (31, 73)
Patients with occurrences of acute chest syndrome (%)[1]	13 (8.6%)	18 (23.1%)

1. Measured through 48 weeks of treatment.
2. Hazard Ratio=0.69 (95% CI=0.52, 0.93), estimated based on unstratified Cox's proportional model. Median time and 95% CI were estimated based on the Kaplan Meier method.

The recurrent crisis event time analysis (Figure 1) yielded an intensity rate ratio (IRR) value of 0.75 with 95% CI= (0.62, 0.90) and (0.55, 1.01) based on unstratified models using the Andersen-Gill and Lin, Wei, Yang and Ying methods, respectively in favor of Endari®, suggesting that over the entire 48- week period, the average cumulative crisis count was reduced by 25% from the Endari® group over the placebo group.

Figure 1. Recurrent Event Time for Sickle Cell Crises by Treatment Group



Endari® was studied in 2 placebo-controlled clinical trials (a phase 3 study, n=230 and a phase 2 study, n=70). In these trials, patients with sickle cell anemia or sickle β0-thalassemia were randomized to receive Endari® (n=187) or placebo (n=111) orally twice daily for 48 weeks followed by 3 weeks of tapering. Both studies included pediatric and adult patients (5-58 years of age) and 54% were female.

Treatment discontinuation due to adverse reactions was reported in 2.7% (n=5) of patients receiving Endari®. These adverse reactions included one case each of hypersplenism, abdominal pain, dyspepsia, burning sensation, and hot flash.

Commercialization and Distribution

United States

Until August 2024, Endari® was marketed and sold in the U.S. by our internal commercial sales team. In August 2024, we reduced our internal sales team and in October terminated the employment of our Chief Commercialization Officer.

We have contracted with AmerisourceBergen Specialty Group (ASD Healthcare LLC), Cencora, formerly known as AmerisourceBergen Corporation companies, McKesson Plasma and Biologics LLC, a McKesson Corporation company, Cardinal Health 108, LLC, a Cardinal Health Inc. company, and CVS Caremark, L.L.C., a CVS Health Corporation company, to distribute Endari® to selected pharmacies and hospitals. AmerisourceBergen Corporation, McKesson Corporation, Cardinal Health, Inc and Caremark are the four largest specialty distributors of prescription drugs in the U.S.

Our two largest distributors, ASD Healthcare LLC and McKesson Plasma and Biologics LLC, each account for more than 20% of net revenue for the year ended December 31, 2024. On a combined basis, these distributors accounted for approximately 45% of net revenue in 2024.

We have a Commercial Patient Assistance Program (C-PAP) to provide financial assistance to eligible patients who are unable to afford their monthly co-payments for Endari®. We also maintain the Endari® Patient Support Program to provide eligible patients with access to Endari® where appropriate.

Outside the United States

We have entered into exclusive distribution agreements with strategic partners to register, commercialize and distribute Endari® in the Gulf Cooperation Council countries, or GCC, and other countries throughout the MENA region in collaboration with our branch office in Dubai. Marketing authorizations have been approved in the United Arab Emirates (March 2022), Qatar (November 2022), Kuwait (December 2022), Bahrain (May 2023) and Oman (July 2023) and our application for marketing authorization is pending in the Kingdom of Saudi Arabia.

We are party to an exclusive early access agreement pursuant to which our strategic partner distributes Endari® on an early access basis in France, the Netherlands and the U.K.

We also may seek future collaborations with other pharmaceutical or biotechnology companies and identify potential licensees and other international opportunities to commercialize Endari®, if approved by foreign regulatory authorities.

Diverticulosis

Diverticulosis, or the presence of colonic diverticula (*i.e.*, pouches in the colon wall), is very common in industrialized nations, with its prevalence increasing with age. An estimated 40% of 60 year-olds and 70% of 80 year-olds have diverticulosis. Of these individuals, 10% to 25% are expected to develop diverticulitis, or the advancement of peri diverticular inflammation and infection, resulting in abdominal pain, nausea, vomiting, constipation, diarrhea, fever, and leukocytosis.

The pathogenesis of diverticulosis is believed to result from structural abnormalities of the colonic wall, disordered motility and low fiber diets. The relationships between glutamine and intestinal physiology have been extensively studied in ulcerative colitis and Crohn’s disease, short bowel syndrome and as a nutritional therapy for critical illnesses. Overall, glutamine elicits the following mechanisms of action within intestinal cells: promotion of enterocyte proliferation, regulation of tight junction proteins; suppression of pro-inflammatory signaling pathways; suppression of intestinal cell apoptosis and cellular stress; and microbiome regulation. Glutamine also helps to maintain intestinal tissue integrity through various signaling pathways.

See the discussion above of our Pilot/Phase 1 study and sub study of the safety and efficacy of prescription grade L-glutamine oral powder in diverticulosis.

We are party to a distributor agreement with Telcon RF Pharmaceutical, Inc., or Telcon pursuant to which we granted Telcon exclusive rights to our PGLG oral powder for the treatment of diverticulosis in South Korea, Japan and China. The agreement contemplates that Telcon will be responsible at its expense for obtaining marketing authorization assuming FDA approval is obtained and for all other commercial activities in the territories. In exchange for the exclusive rights, Telcon paid us a $10 million upfront fee, which is refundable in the event of termination of the distributor agreement for failure to obtain FDA approval. See the "Raw Materials and Manufacturing," below, for more information on our arrangements with Telcon.

Oncology Project

On October 6th, 2021, we licensed a small molecule (KM10544) targeting IRAK4 signaling pathway to treat leukemia and lymphomas. Leukemia is a cancer of blood-forming tissue causing high variation of its manifestation and therefore requiring many different treatment options. While there has been increase in survival rate by seven years from treatment of younger patient population (*i.e*., less than 60 years) since 1970, the survival rate has increased only one year for patients older than 60 years. Waldenstrom macroglobulinemia (WM) is a rare blood cancer that accounts for 1% to 2% of all hematological malignancies. In the U.S., around 1,000 to 5,000 new cases are detected each year. Many of the WM patients are asymptomatic making it difficult to detect and treat WM in its early stages.

We have conducted pre-clinical studies to assess KM10544's efficacy in different cancer cell lines. Acute myeloid leukemia, acute lymphoblastic leukemia, Diffuse Large B Cell Lymphoma and Waldenstrom macroglobulinemia. In *in vitro* studies, KM10544 suppressed the proliferation and induced apoptosis (cell death) in those cancer cell lines with minimal toxic effects in healthy human cell lines, including human dermal fibroblasts and human adipose stromal cells. Depending on the availability of funds, we may undertake further *in vivo* testing to evaluate its toxicity (maximal dose and side effects) and to determine how KM-10544 can affect tumor elimination and delay of cancer growth.

This technology is supported by the PCT Patent International Application No. PCT/US2022/023632 filed on June 4th, 2022, entitled "Compositions and Methods for Treating Cancer."

Chondrocyte Cell Sheet Technology

We have developed human cartilage and bone multilayer cell sheets using human adult mesenchymal stem cells and are conducting preclinical studies to assess the restorative properties of these cell sheets. Cartilage cell sheets have the potential to treat diseases such as articular cartilage injury and osteoarthritis. Bone cell sheets are potentially useful in treating diseases such as osteoarthritis, nonunion and Paget's disease. This cell sheet technology offers several potential advantages over the existing treatment options. The harvesting does not require any special treatment, such as the use of enzymes which could be harmful to the treated cells and patients. Current treatments options involve the injection of individual cells to the damaged area, which requires identification of precise injection location and multiple injections due to rapid cell death. In addition, injection of single cells could have a long-term effect with an ectopic settlement of cells leading to impairment of organ function. In contrast, cell sheet technology allows wider coverage of needed cells to the damaged cartilage and higher cell survival due to the cell sheet structure.

Unlike existing cell therapies, our cell sheets can be produced from mesenchymal stem cells from donors for use on other patients, referred to as allogeneic transplantation. Due to the mesenchymal stem cells unique immune properties the risk of immune rejection is lower compared to organ's transplantation. These advantages should eventually lead to lower-cost and more efficient production of the cell sheets.

This technology is supported by the PCT Patent International Application No. PCT/US2022/047381 filed on October 21, 2022, entitled "Engineering of Stratified Cell Sheets Using Human Mesenchymal Stem Cells".

Device Measuring Cell Sheets Transparency

We have developed a semi-automatic device for quality control in the cell-sheet manufacturing process. This device measures the maturation of the biological cell culture over-time to estimate the harvesting time of the cell sheets, number of cells present in one or more cell sheets of the biological cell culture, and transparency of biological cell culture. The application of this device extends to ophthalmology to assess the transparency of donor's cornea before transplantation. Currently there is no objective method to assess the donor' cornea to understand readiness or compatibility.

This technology is supported by the PCT Patent International Application No. PCT/US2022/011267, entitled "System and Method of Evaluating Cell Culture," filed on January 5, 2022.

Research and Development

We incurred $0.7 million and $1.2 million of research and development expenses in 2024 and 2023, respectively. The decrease was primarily due to suspension of further research and development activities in late 2023. Depending on the availability of funds, we may resume research and development of our existing product candidates in the future, and we may seek to acquire rights to one or more new product candidates.

Raw Materials and Manufacturing

The active pharmaceutical ingredient in Endari® is prescription grade L-glutamine ("PGLG") oral powder, which differs from non-prescription grade L-glutamine widely available as a nutritional supplement. Endari® is differentiated from ordinary L-glutamine by several factors, including the presence of a Drug Master File, oversight of purity and manufacturing at FDA inspected facilities, and stringent stability tested packaging. There are limited suppliers of PGLG worldwide, and we currently obtain substantially all our PGLG, directly or indirectly, from Ajinomoto Health and Nutrition North America, Inc. ("Ajinomoto"), a subsidiary of Ajinomoto North American Holdings, Inc.

Ajinomoto provided PGLG to us free of charge for our clinical trials of Endari®, including our Phase 3 trial. In return, we undertook to purchase from Ajinomoto substantially all our commercial needs for PGLG, subject to certain exceptions; however, we have no long-term supply agreement with Ajinomoto.

On June 16, 2017, we entered into an API supply agreement with Telcon (formerly, Telcon, Inc.), a South Korea-based company, pursuant to which Telcon paid us approximately ₩36.0 billion KRW (approximately $31.8 million) in consideration of the right to supply 25% of our requirements for bulk containers of PGLG for a 15-year term. The amount was recorded as a deferred trade discount. The API supply agreement provides for target annual revenue of more than $5,000,000 and annual "profit" (*i.e.*, sales margin) to Telcon of at least $2,500,000 commencing in 2018. On July 12, 2017, we entered into a raw material supply agreement with Telcon which revised certain terms of the API supply agreement, which we refer to as the "revised API agreement." The revised API agreement is effective for a term of five years and will renew automatically for 10 successive one-year renewal periods, except as either party may determine. In the revised API agreement, we have agreed to purchase a cumulative total of $47.0 million of PGLG over the term of the agreement. In September 2018, we entered into an agreement with Ajinomoto and Telcon to facilitate Telcon's purchase of PGLG from Ajinomoto for resale to us under the revised API agreement. The PGLG raw material purchased from Telcon is recorded in inventory at net realizable value and the excess purchase price is recorded against deferred trade discount.

Our obligations under the agreements with Telcon are secured by a pledge of a convertible bond of Telcon purchased by us under a Convertible Bond Purchase Agreement dated September 28, 2020. See Notes 3, 5, 11 and 12 of the Notes to Consolidated Financial Statements in this Annual Report for more information regarding our obligations under the various agreements with Telcon.

In December 2019, EJ Holdings, Inc., or EJ Holdings a Japanese corporation that was 40% owned by us, purchased from Kyowa Hakko Bio Co. Ltd., or Kyowa, a subsidiary of Kyowa Hakko Kirin Co., Ltd., Kyowa's phased-out facility in Ube, Japan, for the manufacture of L-glutamine and other amino acids. EJ Holdings is engaged in phasing in the plant, including obtaining FDA and other regulatory approvals for the manufacture of PGLG in accordance with current Good Manufacturing Practices ("cGMP"). EJ Holdings has had no revenues since its inception and depended on loans from us to acquire the Ube plant and fund its operations. In September 2023, we discontinued any further loans to EJ Holdings, and in December 2023, we sold and assigned our equity interest in EJ Holdings at our cost to Niihara International Inc., which was formed by Yutaka Niihara, M.D., Ph.D., our former Chairman and Chief Executive Officer and one of our principal stockholders. EJ Holdings will be dependent on equity or loan financing from its new owner or other financing sources to continue its activities. As of December 31, 2024, we had loaned EJ Holdings a total of $23.2 million. EJ Holdings is expected to require substantial financing in order to bring the Ube plant online.

Endari® and any other commercial products we develop must be manufactured and packaged by facilities that meet FDA requirements for cGMP. We believe that Ajinomoto and the packager of Endari® meet FDA cGMP. Previous compliance with cGMP, however, does not guarantee future compliance. We have no long-term agreement with Ajinomoto. We may seek to enter into long-term supply agreements in the future and to establish one or more arrangements with alternative suppliers.

Historically, we have relied upon a single packager of Endari® with which we have no firm commitment to continue its services. The packager repeatedly delayed the packaging of Endari® originally scheduled for December 2023, which resulted in a severe shortage of finished goods inventory and materially, adversely affected our Endari® sales in 2024. Although we believe we have sufficient finished goods inventory on hand for at least the first half of 2025, we have engaged a new source of packaging to avoid similar problems in the future. There is no assurance that we can retain suitable packaging sources or, if we do, that we will not experience delays in the production of finished goods or future shortages of Endari®.

Competition

The biopharmaceutical industry is highly competitive and subject to rapid and significant technological change. We face potential competition from both large and small pharmaceutical and biotechnology companies, academic institutions, governmental agencies (such as the National Institutes of Health) and public and private research institutions. Many of our competitors and potential competitors have far greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals, marketing and selling approved products. Historically, for example, we have had insufficient financial resources to engage in meaningful advertising or marketing of Endari®. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. The key competitive factors affecting the success of each of our product candidates, if approved, are likely to be their safety, efficacy, convenience, price, the level of proprietary and generic competition, and the availability of coverage and reimbursement from government and other third-party payors. Our Endari® sales may suffer or our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer or more effective, have fewer or less severe side effects, or are more convenient or less expensive than any products that we may develop. Our competitors may also obtain FDA or other regulatory approval for their product candidates more rapidly than we may be able to do so for any existing or new product candidates of ours, which could result in their establishing a strong market position before we are able to enter the market.

Sickle Cell Disease

Endari® is approved as a therapy to reduce the acute complications of SCD in adult and pediatric patients 5 years of age and older. The other drugs which are indicated to treat sickle cell disease are hydroxyurea (marketed as DROXIA or Hydrea by Bristol-Myers Squibb Company and available in generic form), which is approved to reduce the frequency of painful crises and need for blood transfusions in patients with sickle cell anemia for the treatment of adults with SCD; Voxelotor (marketed as Oxbryta™ by Pfizer Inc.) tablets for the treatment of SCD in adults and children 4 years of age and older; and crizanlizumab (marketed as Adakveo® by Novartis International AG) intravenous infusion approved to reduce the frequency of VOCs in adult and pediatric patients ages 16 years and older with SCD. Pfizer subsequently withdrew Oxbryta™ from the market due to safety concerns. Several companies are also developing product candidates for chronic treatment in SCD, and several other companies are in clinical trials to investigate new treatments for SCD.

Endari® also faces potential competition from one-time therapies for treating patients with severe SCD, including LentiGlobin BB305, which is being developed by bluebird bio, Inc. to treat SCD by inserting a functional human beta-globin gene into a patient's hematopoietic stem cells, or HSCs, *ex vivo* and then transplanting the modified HSCs into the patient's bloodstream. Bluebird has indicated its plans to pursue an accelerated development and approval pathway for its gene therapy product in SCD. Others are seeking to develop one-time therapies such as hematopoietic stem cell transplantation, gene therapy and gene editing, including Casegeyy, a groundbreaking CRISPR-based gene editing therapy from Vertex Pharmaceuticals and CRISPR Therapeutics approved by the FDA in December 2023, and a second recently approved treatment using conventional gene therapy, bluebird bio's lentiviral therapy, Lyfgenia. It is too early to predict the impact of these new treatments, but their availability may adversely affect the market for Endari® in the U.S. and elsewhere.

We are also aware of efforts to develop cures for SCD through approaches such as bone marrow treatments. Although bone marrow transplant is currently available for SCD patients, its use is limited by the lack of availability of matched donors and by the risk of serious complications, including graft versus host disease and infection.

The marketing exclusivity of Endari® in the U.S. afforded by its Orphan Drug designation expired in July 2024 and, on July 15, 2024, ANI Pharmaceuticals, Inc., or ANI. announced the launch of its L-Glutamine Oral Powder, a generic version of Endari®, following final approval of its Abbreviated New Drug Application from the U.S. Food and Drug Administration. Management believes that the introduction of ANI's generic product or other generic versions of L-Glutamine oral powder has adversely affected Endari® sales and is likely to adversely affect the reimbursement rates that

Medicare, Medicaid and third-party payors are willing to pay for Endari®, which could have a material, adverse effect on our future net revenues.

Endari® also competes with non-prescription grade L-glutamine, which is widely available as a dietary supplement at substantially lower prices than Endari®. Dietary supplements may be marketed without FDA approval, are generally not reimbursed by payors and are not subject to the rigorous quality control standards required by regulatory authorities for prescription drug products. Also, unlike prescription drugs, manufacturers of dietary supplements may not make claims that the supplements will cure, mitigate, treat or prevent disease, and we are not aware of any reports in peer-reviewed literature regarding the effectiveness of non-prescription grade L-glutamine supplements in treating SCD in controlled clinical trials.

Diverticulosis

There is no currently FDA-approved treatment for diverticulosis.

Oncology Treatment

IRAK-4 is a popular targeted pathway of inflammatory diseases, including cancers. In our pre-clinical studies, Kainos's novel IRAK-4 inhibitor, referred to as KM10544, has shown promising signs of efficacy against FLT-3 positive leukemia cell lines and other hematological malignancy cell lines such as Waldenstrom Macroglobulinemia cell line.

KM10544 technology is supported by the PCT Patent International Application No. PCT/US2022/023632, entitled "Compositions and Methods For Treating Cancer", filed on April, 6 2022.

Chondrocyte Cell Sheet Technology

Currently, no cell therapy to treat damaged bone has been approved by the FDA, using mesenchymal stem cells and only 1 cell therapy was approved by the FDA to treat cartilage (Tradename: MACI). However, MACI approved therapy requires the use of porcine collagen membrane, the use of animal product (serum) and it is an autologous transplantation of patient's cartilage. MACI cell therapy can't be used for patient's carrying genetic mutation or for patients with no cartilage. According to available data from clinicaltrial.gov, there is only one clinical trial of the efficacy of cartilage cell sheets, "Safety and Efficacy Study of Cells Sheet-Autologous Chondrocyte Implantation to Treat Articular Cartilage Defects (CS-ACI)" (Xijing Hospital, Xi'an Shi, China; Tangdu Hospital, Xi'an Shi, China; Xi'An Honghui Hospital, Xi'an Shi, China) (ClinicalTrials.gov Identifier: NCT01694823).

The development of cell sheets using mesenchymal stem cells (*e.g* adipose stromal cells), may lead to new treatments of patients. In addition, the cell sheets were engineered using animal-free culture media and have the potential translational application for allogeneic transplantation. Our cell sheet therapy also makes possible to layer different types of cell sheets by harvesting the cell sheet without the use of harmful enzymes (trypsin or dispase) that may damage the cell-based therapy and potentially to construct *in vitro* stratified tissue equivalents by alternately layering different types of harvested cell sheets to provide regenerated tissue architectures, resembling human tissues. For example, cartilage cell sheets can be layered on the top of a bone cell sheet before transplantation if the patient's health condition requires it. This technique holds promise for the study of cell-cell communications and angiogenesis in reconstructed, three-dimensional environments, as well as for tissues engineering with complex, multicellular architectures, and drug-screening.

Device Measuring Cell Sheets Transparency

Currently, there is no device on the market that can measure the transparency or maturation of cell sheets. This device was created to be used as a quality control tool. The device will allow us to follow up the maturity of biological cell cultures, to estimate the time for cell sheet harvesting, as well as to estimate the number per cell sheet using a non-invasive methodology (part of the physical cell sheet property). Knowing the number of cells per cell sheet is a critical information for federal agencies, and there is no methodology to know the number of cells per cell sheet, besides digesting the whole cell sheet using enzyme (making the cell sheet non transplantable). This semi-automatic device will become an essential tool for quality control in the growing field of cell sheet translational medicine. The potential application of this device includes assessment of the transparency of donor's cornea before transplantation. Currently, there is no objective method to assess the timing for cell sheet harvesting and to assess the donor's cornea transparency for corneal transplantation. We have filed a patent application in the U.S. for this technology and are in the process of improving the device. We may seek a potential partner to develop or commercialize the device and expand the application of the device.

Government Regulation

Under Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act ("FD&C Act"), a person may submit an NDA for which one or more of the clinical studies relied upon by the applicant for approval were not conducted by or for the applicant and for which the applicant does not have a right of reference or use from the person by or for whom the clinical studies were conducted. Instead, a 505(b)(2) applicant may rely on published literature containing the specific information (*e.g.*, clinical trials, animal studies) necessary to obtain approval of the application. The applicant may also rely on the FDA's finding of safety and/or effectiveness of a drug previously approved by the FDA when the applicant does not own or otherwise have the right to access the data in that previously approved application. The 505(b)(2) pathway to marketing authorization thus allows an applicant to submit a NDA without having to conduct its own studies to obtain data that are already documented in published reports or previously submitted NDAs. In addition to relying on safety data from the Phase 2 and 3 studies of Endari®, we intend to take advantage of the 505(b)(2) pathway to the extent published literature will further support any NDA for PGLG.

Regulation by United States and foreign governmental authorities is a significant factor in the development, manufacture and expected marketing of our product candidates and in our ongoing research and development activities. The nature and extent to which such regulation will apply to us will vary depending on the nature of the product candidates we seek to develop.

Human therapeutic products, such as drugs, biologics and cell-based therapies, are subject to rigorous preclinical and clinical testing and other preapproval requirements of the FDA and similar regulatory authorities in other countries. Various federal and state statutes and regulations govern and influence pre- and post-approval requirements related to research, testing, manufacturing, labeling, packaging, storage, distribution and record keeping of such products to ensure the safety and effectiveness for their intended uses. The process of obtaining marketing approval and ensuring post approval compliance with the FD&C Act for drugs and biologics (and applicable provisions of the Public Health Service Act for biologics), and the regulations promulgated thereunder, and other applicable federal and state statutes and regulations, requires substantial time and financial resources. Any failure by us or our collaborators to obtain, or any delay in obtaining, marketing approval could adversely affect the marketing of any of our product candidates, our ability to receive product revenues, and our liquidity and capital resources.

The manufacture of these products is subject to cGMP regulations. The FDA inspects manufacturing facilities for compliance with cGMP regulations before deciding whether to approve a product candidate for marketing.

The steps required by the FDA before a new product, such as a drug, biologic or cell-based therapy, may be marketed in the United States include:

- completion of preclinical studies (during this stage, the treatment is called a development candidate);
- the submission to the FDA of a proposal for the design of a clinical trial program for studying in humans the safety and effectiveness of the product candidate. This submission is referred to as an IND. The FDA reviews the IND to ensure it adequately protects the safety and rights of trial participants and that the design of the studies is adequate to permit an evaluation of the product candidate's safety and effectiveness. The IND becomes effective within thirty days after the FDA receives the IND, unless the FDA notifies the sponsor that the investigations described in the IND are deficient and cannot begin;
- the conduct of adequate and well controlled clinical trials, usually completed in three phases, to demonstrate the safety and effectiveness of the product candidate for its intended use;
- the submission to the FDA of a marketing application, a NDA, if the product candidate is a drug, that provides data and other information to demonstrate the product is safe and effective for its intended use ("BLA"), if the product candidate is a biologic that provides data and other information to demonstrate that the product candidate is safe, pure, and potent; and
- the review and approval of the NDA by the FDA before the product candidate may be distributed commercially as a product.

In addition to obtaining FDA approval for each product candidate before we can market it as a product, the manufacturing establishment from which we obtain it must be registered and is subject to periodic FDA post approval inspections to ensure continued compliance with cGMP requirements. If, as a result of these inspections, the FDA determines that any equipment, facilities, laboratories, procedures or processes do not comply with applicable FDA regulations and the conditions of the product approval, the FDA may seek civil, criminal, or administrative sanctions and/or remedies against us,

including the suspension of the manufacturing operations, recalls, the withdrawal of approval and debarment. Manufacturers must expend substantial time, money and effort in the area of production, quality assurance and quality control to ensure compliance with these standards.

Preclinical testing includes laboratory evaluation of the safety of a product candidate and characterization of its formulation. Preclinical testing is subject to Good Laboratory Practice ("GLP") regulations. Preclinical testing results are submitted to the FDA as a part of an IND which must become effective prior to commencement of clinical trials. Clinical trials are typically conducted in three sequential phases following submission of an IND. In Phase 1, the product candidate under investigation (and therefore often called an investigational product) is initially administered to a small group of humans, either patients or healthy volunteers, primarily to test for safety (*e.g.*, to identify any adverse effects), dosage tolerance, absorption, distribution, metabolism, excretion and clinical pharmacology, and, if possible, to gain early evidence of effectiveness. In Phase 2, a slightly larger sample of patients who have the condition or disease for which the investigational product is being studied receive the investigational product to assess the effectiveness of the investigational product, to determine dose tolerance and the optimal dose range, and to gather additional information relating to safety and potential adverse effects. If the data show the investigational product may be effective and has an acceptable safety profile in the targeted patient population, Phase 3 studies, also referred to as pivotal studies or enabling studies, are initiated to further establish clinical safety and provide substantial evidence of the effectiveness of the investigational product in a broader sample of the general patient population, to determine the overall risk benefit ratio of the investigational product, and provide an adequate basis for physician and patient labeling. During all clinical studies, Good Clinical Practice ("GCP") standards and applicable human subject protection requirements must be followed. The results of the research and product development, manufacturing, preclinical studies, clinical studies, and related information are submitted in a NDA to the FDA.

The process of completing clinical testing and obtaining FDA approval for a new therapeutic product, such as a drug, biologic or cell-based product, is likely to take years and require the expenditure of substantial resources. If a NDA is submitted, there can be no assurance that the FDA will file, review, and approve it. Even after initial FDA approval has been obtained, post market studies could be required to provide additional data on safety or effectiveness. Additional pivotal studies would be required to support adding other indications to the labeling. Also, the FDA will require post market reporting and could require specific surveillance or risk mitigation programs to monitor for known and unknown side effects of the product. Results of post marketing programs could limit or expand the continued marketing of the product. Further, if there are any modifications to the product, including changes in indication, manufacturing process, labeling, or the location of the manufacturing facility, a NDA supplement would generally be required to be submitted to the FDA prior to or corresponding with that change, or for minor changes in the periodic safety update report that must be submitted annually to the FDA.

The rate of completion of any clinical trial depends upon, among other factors, sufficient patient enrollment and retention. Patient enrollment is a function of many factors, including the size of the patient population, the nature of the trial, the number of clinical sites, the availability of alternative therapies, the proximity of patients to clinical sites, and the eligibility and exclusion criteria for the trial. Delays in planned patient enrollment might result in increased costs and delays. Patient retention could be affected by patient noncompliance, adverse events, or any change in circumstances making the patient no longer eligible to remain in the trial.

Failure to adhere to regulatory requirements for the protection of human subjects, to ensure the integrity of data, other IND requirements, and GCP standards in conducting clinical trials could cause the FDA to place a "clinical hold" on one or more studies of a product candidate, which would stop the studies and delay or preclude further data collection necessary for product approval. Noncompliance with GCP standards would also have a negative impact on the FDA's evaluation of a NDA. If at any time the FDA finds that a serious question regarding data integrity has been raised due to the appearance of a wrongful act, such as fraud, bribery or gross negligence, the FDA may invoke its Application Integrity Policy ("AIP") under which it could immediately suspend review of any pending NDA or refuse to accept the submission of a NDA as filed, require the sponsor to validate data, require additional clinical studies, disapprove a pending NDA or withdraw approval of marketed products, as well as require corrective and preventive action to ensure data integrity in future submissions. Significant noncompliance with IND regulations could result in the FDA not only refusing to accept a NDA as filed but could also result in enforcement actions, including civil and administrative actions, civil money penalties, criminal prosecution, criminal fines and debarment. Whether or not FDA approval has been obtained, approval of a product by regulatory authorities in foreign countries must be obtained prior to the commencement of marketing the product in those countries.

The requirements governing the conduct of clinical trials and product approvals vary widely from country to country, and the time required for approval might be longer or shorter than that required for FDA approval. Although there

are some procedures for unified filings for some European countries, in general, each country at this time has its own procedures and requirements.

In most cases, if the FDA has not approved a product candidate for sale in the United States, the unapproved product may be exported to any country in the world for clinical trial or sale if it meets U.S. export requirements and has marketing authorization in any listed country without submitting an export request to the FDA or receiving FDA approval to export the product, as long as the product meets the regulatory requirements of the country to which the product is being exported. Listed countries include each member nation in the European Union or the European Economic Area, Canada, Australia, New Zealand, Japan, Israel, Switzerland and South Africa. If an unapproved product is not approved in one of the listed countries, the unapproved product may be exported directly to an unlisted country if the product meets the requirements of the regulatory authority of that country, and the FDA determines that the foreign country has statutory or regulatory requirements similar or equivalent to the United States.

In addition to the regulatory framework for product approvals, we and our collaborative partners must comply with federal, state and local laws and regulations regarding occupational safety, laboratory practices, the use, handling and disposition of radioactive materials, environmental protection and hazardous substance control, and other local, state, federal and foreign regulation. All facilities and manufacturing processes used by third parties to produce our product candidates for clinical use in the United States and our products for commercialization must comply with cGMP requirements and are subject to periodic regulatory inspections. The failure of third-party manufacturers to comply with applicable regulations could extend, delay or cause the termination of clinical trials conducted for our product candidates or the withdrawal of our products from the market. The impact of government regulation upon us cannot be predicted and could be material and adverse. We cannot accurately predict the extent of government regulation that might result from future legislation or administrative action.

Patents, Proprietary Rights and Know-How

We rely on a combination of patent licenses, trademark rights, trade secret protection, distribution agreements, manufacturing agreements, manufacturing capability and other unpatented proprietary information to protect our intellectual property rights. While we do not currently own any issued patents directed to the treatment of sickle cell anemia, we do own patent applications in that area, as well as issued patents and patent applications directed to the treatment of diverticulosis, diabetes and hypertriglyceridemia. We had Orphan Drug market exclusivity for the treatment of sickle cell anemia with Endari® in the United States through July 7, 2024 and have been granted Orphan Medicinal status in the EU which, if Endari® is approved in the EU, will afford ten years marketing exclusivity from the approval date. We may seek to pursue improvements and reformulations of Endari® to preserve our intellectual property rights in Endari following the expiration of its Orphan Drug designation.

We also rely on employee agreements to protect the proprietary nature of our products. We require that our officers and key employees enter into confidentiality agreements that require these officers and employees to assign to us the rights to any inventions developed by them during their employment with us.

Patents

We have issued patents related to compositions including PGLG and methods involving administration of PGLG for the treatment of diverticulosis in the United States, Europe, Japan, Australia, India, Mexico, China, Indonesia, Korea and Russia. Associated patent applications are currently pending in the United States, the EU, Brazil, Korea and Russia.

Patents directed to compositions for decreasing HbA1C levels in individuals who are shown to have average blood sugar levels in the diabetic range have issued in Japan, Indonesia and the Philippines. Associated applications are currently pending in the United States, Europe, Brazil, India, China, the Philippines, and Japan.

We have issued patents directed to the treatment of hypertriglyceridemia in Japan and the Philippines. A corresponding European patent application has been granted and is currently the subject of an Opposition proceeding. Associated applications are pending in the United States, Brazil, India, China, and the Philippines.

A patent application directed to the treatment of sickle cell using a multi-component composition is pending in the United States and Europe. An international application directed to the same invention has been filed under the Patent Cooperation Treaty.

We have a pending international (PCT) patent application directed to the treatment of cancers with KM10544, alone or in combination with a Bruton Tyrosine Kinase (BTK) inhibitor or a Poly (ADP-ribose) polymerase (PARP) inhibitor. The cancers being treated may have a MyD88 mutation (*e.g.*, the L265P missense mutation) and can include hematologic cancers, such as Waldenstrom Macroglobulemia (WM), Acute Myeloid Leukemia (AML), and diffuse large B-cell lymphoma (DLBCL), and solid tumors such as rectal cancer, pancreatic cancer, and small cell lung cancer. The application is expected to enter into national stages by June 2024 and has a projected expiration date in 2042.

We have a pending PCT patent application directed to devices and methods for measuring the cell sheets maturation, in Brazil, China, European Union, Eurasia, India, Japan, South Korea and USA. The technology is important for the preparation and use of stem cell-derived cells sheets, such as corneas, cartilage, epithelial cell sheets and cell sheets. This non-invasive approach can determine the time progression of cell sheet growth, the maturity of the cell sheet, and the number of cells per cell sheet before harvesting and transplantation. The application is expected to enter into national stages by July 2023 and has a projected expiration date in 2042.

We have a pending PCT patent application directed to the preparation and use of cell sheets. The prepared cell sheets can be used for the treatment of cartilage-related conditions such as cartilage injury and osteoarthritis, and bone diseases such as nonunion bone diseases and Paget's disease. The cell sheets can be formed of a multilayer of cells grown and harvested in an intact cell sheet that can be transplanted as a patch on the injured area.

License Agreements

On October 7, 2021, we entered into a License Agreement with Kainos Medicine, Inc. or Kainos, under which Kainos granted us an exclusive license in the territory encompassing the U.S., the U.K. and the EU to patent rights, know-how and other intellectual property relating to Kainos's IRAK4 inhibitor, referred to as KM10544, for the treatment of cancers, including leukemia, lymphoma and solid tumor cancers. In consideration of the license, we paid Kainos a six-figure upfront fee in cash and agreed to make future cash payments upon the achievement of specified milestones totaling in the mid-eight figures, a single-digit percentage royalty based on net sales of the licensed products and a similar percentage of any sublicensing consideration. The License Agreement will continue on a licensed product-by-licensed product and country-by-country basis until the last to expire valid claim of any licensed patent in such country.

Trademarks

We hold U.S. trademark registrations for "Emmaus Medical" and "Endari" and a trademark registration for "Xyndari™" (as Endari® will be marketed if approved) in the EU. This Annual Report also contains trademarks, service marks, trade names and copyrights of other companies, which are the property of their respective owners. Solely for convenience, these trademarks, service marks, trade names and copyrights may appear without the® or TM symbols, but such references are not intended to indicate that we or the other owners do not assert, to the fullest extent under applicable law, our rights, or the rights of any licensor to the same.

Employees

As of December 31, 2024, we had 35 employees globally, 34 of whom were full time. We have not experienced any work stoppages and we consider our relations with our employees to be good.

Corporate Information

We were incorporated in Delaware on March 20, 1987 under the name Age Research, Inc. Prior to January 16, 2007, our company (then called Strativation, Inc.) existed as a "shell company" with nominal assets and whose sole business was to identify, evaluate and investigate various companies to acquire or with which to merge. On January 16, 2007, we entered into an Agreement and Plan of Merger with CNS Response, Inc., and CNS Merger Corporation, our wholly owned subsidiary, pursuant to which CNS Merger Corporation merged with and into CNS Response, Inc., which survived the merger. On March 7, 2007, we changed our corporate name to CNS Response, Inc. On November 2, 2015, we changed our corporate name to MYnd Analytics, Inc. On July 17, 2019, we completed our merger transaction with EMI Holding, Inc., formerly known as Emmaus Life Sciences, Inc. ("EMI"), with EMI surviving as our wholly owned subsidiary. On July 17, 2019, immediately following the merger, we changed our name to "Emmaus Life Sciences, Inc."

Our principal executive offices and corporate offices are located at 21250 Hawthorne Boulevard, Suite 800, Torrance, California, and our telephone number at that address is (310) 214-0065. We maintain an Internet website at the following address: www.emmausmedical.com. The information on our website is not incorporated by reference in this Annual Report or in any other filings we make with the Securities and Exchange Commission ("SEC").

ITEM 1A. RISK FACTORS

Risks Related to Our Business

We have operated at a loss and may continue to operate at a loss for the foreseeable future.

We realized comprehensive loss of $9.3 million for the year ended December 31, 2024, compared to comprehensive loss of $1.3 million for the year ended December 31, 2023, and have historically operated at a loss due to substantial expenditures related to repayment of our outstanding indebtedness, commercialization of Endari®, pursuit of marketing authorization of Endari outside the U.S., and general and administrative expenses. There is no assurance that we will be able to increase our Endari® sales or attain sustainable profitability or that we will have sufficient capital resources to fund our operations and repay our existing indebtedness until we are able to generate sufficient cash flow from operations.

We are dependent on restructuring or refinancing our existing indebtedness and on new financing to sustain our operations, and there is substantial doubt regarding our ability to continue as a going concern.

The consolidated financial statements included in this Annual Report have been prepared on the basis that the company will continue as a going concern. We had cash and cash equivalents of $1.4 million and a working capital deficit of $56.8 million at December 31, 2024. Management expects that the company's current liabilities and operating expenses, including debt service on our existing indebtedness and the expected costs relating to the commercialization of Endari® in the MENA region and elsewhere, will exceed our existing cash balances and cash expected to be generated from operations for the foreseeable future. To meet the company's current liabilities and operating expenses, we will need to restructure or refinance our existing indebtedness and raise additional funds through related-party loans, third-party loans, equity and debt financings or licensing or other strategic arrangements. In early 2024, we restructured a total of $11.1 million principal amount of convertible promissory notes outstanding as of December 31, 2023 to extend the maturity of the notes by one year and repay the notes in two equal installments of principal and accrued interest due July 2024 and on maturity on February 28, 2025. As of February 28, 2025, $11.0 million principal amount and accrued and unpaid interest became due and payable. We have no understanding or arrangement to further extend the maturity of the convertible promissory notes or to restructure or refinance our other existing indebtedness or for any additional financing, except for the factored accounts receivable arrangement of our Emmaus Medical subsidiary. There can be no assurance that the company will be able to repay on maturity, restructure or refinance its existing indebtedness or complete any additional equity or debt financings on favorable terms, or at all, or enter into licensing or other strategic arrangements such as a merger or acquisition. If we are unable to do so, we may seek to restructure the company in bankruptcy, or otherwise. Due to the uncertainty of our ability to meet our current liabilities and operating expenses, there is substantial doubt about the company's ability to continue as a going concern for 12 months from the date of issuance of the consolidated financial statements contained in this Annual Report, and the report of our independent public accounting firm on our consolidated financial statements as of and for the year ended December 31, 2024 contains a going concern explanatory paragraph. The consolidated financial statements do not include any adjustments that might result from the outcome of these uncertainties.

We are dependent on the commercial success of our only product, Endari®.

Our ability to become profitable will depend upon the commercial success of Endari®. In addition to the risks discussed elsewhere in this section, our ability to generate future revenues from Endari® sales will depend on a number of factors, including, but not limited to:

- the efficacy and safety of Endari®;
- the achievement of broad market acceptance and our ability to obtain adequate reimbursement by third-party payors for Endari®;
- the effectiveness of our in-house commercialization team and distribution partners and other efforts in successfully marketing and selling Endari®;
- our ability to effectively work with physicians to ensure that their patients have access to Endari® and fill and refill prescriptions to adhere to their twice daily regimen;
- our ability to compete effectively against competing products, including hydroxyurea, ADAKVEO® (crizanlizumab), ANI Pharmaceuticals, Inc.'s L-Glutamine Oral Powder generic version of Endari and other potential generic products;

- our contract manufacturers' ability to successfully manufacture commercial quantities of Endari® at acceptable cost levels and in compliance with regulatory requirements; and
- our ability to comply with ongoing regulatory requirements.

Because of the numerous risks and uncertainties associated with our commercialization efforts, we are unable to predict the extent of revenues we will generate from Endari® sales or the timing for when or the extent to which we will become profitable, if ever. Even if we do achieve increased net revenues from Endari® sales and become profitable, we may not be able to sustain our revenues or maintain or increase our profitability on an ongoing basis.

We face intense competition from companies with greater resources than us, and if our competitors are successful in marketing or develop alternative treatments, our commercial opportunities may be reduced or eliminated.

The pharmaceutical industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on developing proprietary therapeutics. We face competition from a number of sources, some of which may target the same indication as Endari®, such as pharmaceutical companies, including generic drug companies, biotechnology companies, drug delivery companies and academic and research institutions, many of which have greater financial resources, marketing capabilities, including well-established sales forces, manufacturing capabilities, research and development capabilities, experience in obtaining regulatory approvals for product candidates than do we. For example, in late 2019 the FDA approved a new drug application, or NDA, submitted by Novartis, permitting the marketing of ADAKVEO® (crizanlizumab-tmca) to reduce the frequency of vaso-occlusive crises in adults and pediatric patients aged 16 years and older with SCD. ADAKVEO®, which is administered by intravenous infusion every four weeks, is a selectin blocker humanized IgG2 kappa monoclonal antibody that binds to P-selectin. Also, in late 2019, Global Blood Therapeutics, Inc. which later acquired by Pfizer Inc., ("Pfizer") announced that the FDA approved its NDA for Oxbryta™ (voxelotor) tablets for the treatment of SCD in adults and children 12 years of age and older. Oxbryta™ is an oral, once-a-day therapy intended to treat SCD by targeting hemoglobin polymerization. Pfizer has withdrawn Oxbryta™ from the market due to safety concerns. Novartis has far greater financial, sales and marketing resources than our company and there is no assurance that we will be able to compete effectively with ADAKVEO® as a stand-alone therapy or that Endari® will gain widespread use as an adjunct to the use of ADAKVEO®. In December 2023, Casgevy, a groundbreaking CRISPR-based gene editing therapy from Vertex Pharmaceuticals and CRISPR Therapeutics was approved for marketing by the FDA, and a second treatment using conventional gene therapy, Bluebird Bio's lentiviral therapy, Lyfgenia, also was recently approved for marketing by the FDA. If we are unable to compete effectively or successfully position Endari® as a complement to alternative therapies, our Endari® sales and results of operation may suffer, which could have a material, adverse effect on our financial condition. We also face competition from hydroxyurea, ANI Pharmaceuticals, Inc.'s L-Glutamine Oral Powder generic version of Endari®, and non-prescription grade L-glutamine supplements. Non-prescription grade L-glutamine is manufactured in large quantities, primarily by a few large chemical companies, and processed and sold as a nutritional supplement. The sale of non-prescription grade L-glutamine nutritional supplements, or generic prescription-grade or non-prescription grade L-glutamine products, at prices lower than the prices that we charge for Endari® could have a material adverse effect on our future sales and net revenues and our results of operations and financial condition.

If we are unable to achieve and maintain adequate levels of coverage and reimbursement for Endari®, on reasonable pricing terms, its commercial success may be severely hindered.

The market exclusivity for Endari® for SCD in the U.S. expired on July 7, 2024 and Endari® has no intellectual property protection of Endari® in the U.S. or orphan drug or other market exclusivity in the MENA region, which lack of exclusivity may result in the introduction of generic versions of PGLG in the U.S. and MENA regions and adversely affect our Endari® sales and results of operations in future periods. On July 15, 2024, for example, ANI Pharmaceuticals, Inc., or ANI. announced the launch of its L-Glutamine Oral Powder, a generic version of Endari®, following final approval of its Abbreviated New Drug Application from the U.S. Food and Drug Administration. The introduction of ANI's generic product or other generic versions of L-Glutamine oral powder has adversely affected Endari® sales in the U.S. and is likely to adversely affect the reimbursement rates that Medicare, Medicaid and third-party payors are willing to pay for Endari®, which could have a material, adverse effect on our future sales. It is also possible that ANI or other generic maker will seek to introduce generic versions of Endari® in the MENA region.

Sales of Endari® depend on the availability of adequate coverage and reimbursement from third-party payors and governmental healthcare programs, such as Medicare and Medicaid in the U.S. and government payors in the MENA region. Patients who are prescribed medicine for the treatment of their conditions generally rely on third-party payors to reimburse all or a significant part of the costs associated with their prescription drugs. Coverage determination depends on financial, clinical and economic outcomes that often disfavors new drug products when more established or lower cost therapeutic

alternatives are already available or subsequently become available. Although Endari® currently is reimbursable by the Centers for Medicare and Medicaid Services, and every state provides coverage for Endari® for outpatient prescriptions to all eligible Medicaid enrollees within their state Medicaid programs, the reimbursement amounts are subject to change and may not be adequate and may require higher co-payments that patients find unacceptable. The Company also has negotiated reimbursement rates for Endari® in the MENA region which are comparable to Medicare and Medicaid reimbursement rates. Patients are unlikely to use Endari® unless reimbursement is adequate to cover a significant portion of the cost of Endari®. Future coverage and reimbursement rates will likely be subject to increased scrutiny from payors in the U.S. and perhaps government payors in the MENA region. Third-party coverage and reimbursement for Endari® may cease to be available or adequate, which could have a material adverse effect on our business, results of operations, financial condition, and prospects.

The market for Endari® also depends on access to third-party payors' drug formularies, which are lists of medications for which third-party payors provide coverage and reimbursement. The competition in the industry to be included in such formularies may lead to downward pricing pressure on us. Also, third-party payors may refuse to include Endari® in their formularies or otherwise restrict patient access to Endari® if a less costly generic equivalent or other alternative treatment is available. In this regard, Medicare and Medicaid reimbursement rate for branded products such as Endari are subject to decrease to the cost of comparable generic versions of the products such as ANI's L-Glutamine Oral Powder or other generic versions of Endari®. In light of the recent launch of ANI's L-Glutamine Oral Powder, we expect to reduce the wholesale acquisition cost of Endari to address these reimbursement requirements.

Sales of Endari® in the MENA region are subject to lengthy reimbursement terms compared to U.S. sales, and management expects that our accounts receivable aging will be adversely affected by such terms as sales in the MENA region increase compared to our U.S. sales.

The majority of Endari® sales are to a few customers and the loss of a customer could adversely affect our results of operations.

We sell Endari® to specialty distributors and specialty pharmacies which, in turn, resell Endari® to pharmacies, hospitals and other customers. Four of our distributors accounted for approximately 71% of Endari sales in the year ended December 31, 2024. The loss of any of these distributors or a material reduction in their Endari® purchases could have a material adverse effect on our business, results of operations, financial condition and prospects.

In addition, the distribution network for pharmaceutical products in the U.S. has undergone, and may continue to undergo, significant consolidation marked by mergers and acquisitions. As a result, a smaller number of large distributors control a significant share of the market, which has increased, and may continue to increase, competitive and pricing pressures on pharmaceutical products. There is no assurance that we can manage these pricing pressures or that specialty distributor and specialty pharmacy purchases will not fluctuate unexpectedly from period to period.

The market exclusivity for Endari® for SCD in the U.S. expired in July 2024 and Endari® has no or limited market exclusivity in the MENA region, which lack of exclusivity could adversely affect our Endari® sales and results of operations in the U.S. and in the MENA region.

The exclusivity protections that protect Endari® for use for SCD are limited in ways that may affect our ability to effectively exclude third parties from competing against us. In particular:

- Orphan Drug market exclusivity protection for Endari® for SCD expired in the U.S. on July 7, 2024 and Endari® faces competition from less expensive generic versions of PGLG; and
- we do not have intellectual property protection nor orphan drug designation or data exclusivity in key markets for Endari® in the MENA region, which could adversely affect the commercial success of Endari® in the region.

These limitations and any reductions in our expected protection, including other products that could be approved by FDA under the Orphan Drug Act, may subject Endari® to greater competition than we expect and could adversely affect our ability to generate revenue from Endari®, perhaps materially. These circumstances may also impair our ability to obtain license partners or other international commercialization opportunities on terms acceptable to us, if at all.

Many of our potential customers are in markets with underdeveloped health care systems.

Our only product, Endari®, is a prescription-grade L-glutamine, or PGLG, oral powder treatment for sickle cell anemia and sickle ß0-thalassemia, two of the most common forms of SCD. SCD is a genetic blood disorder that affects 20

million to 25 million people worldwide and occurs primarily among those whose ancestors are from regions including sub-Saharan Africa, South America, the Caribbean, Central America, the Middle East, India and Mediterranean regions such as Turkey, Greece and Italy. Thus, while SCD affects people throughout the world, the prevalence of SCD is higher in certain geographies, such as central and sub-Saharan Africa and the Caribbean, that currently have underdeveloped health care systems or significantly lower rates of health insurance coverage and incidence of these conditions in the United States is relatively low. Furthermore, many potential patients in many of these geographies are low-income and may be unable to afford Endari®. These factors may ultimately limit our addressable market. Our ability to achieve and sustain profitability may be adversely impacted if we are unable to access markets with greater prevalence of SCD or reach enough SCD patients in geographies with more well-developed health care systems.

A variety of risks associated with marketing Endari® internationally could hurt our business.

We are seeking regulatory approval for Endari® for SCD in the Kingdom of Saudi Arabia but may not be successful. For example, in May 2019, we announced that the European Medicines Agency's, EMA's, Committee for Medicinal Products for Human Use, or CHMP, had adopted a negative opinion regarding our application for marketing authorization, or MAA, based upon the CHMP's position that our main clinical study did not conclusively support the efficacy of the treatment in SCD patients. In light of the CHMP's opinion, we withdrew our MAA in September 2019. There is no assurance that we will be successful in obtaining marketing authorization in the Kingdom of Saudi Arabia or other jurisdictions outside the U.S. If we obtain marketing authorization, we expect that we will be subject to additional risks related to operating in foreign countries including:

- business interruptions resulting from geopolitical actions, including war such as the Russian invasion of Ukraine, Israel-Palestinian conflict or terrorism or actual or potential public health emergencies, such as the COVID-19 epidemic or the emergence of new pandemics;
- differing regulatory requirements in foreign countries such as lack of orphan designation or other market exclusivity and unregulated competition from generic L-glutamine products or nutritional supplements;
- the potential for legal or illegal parallel importing (*i.e.*, when a local seller, faced with high or higher local prices, opts to import goods from a foreign market with low or lower prices rather than buying them locally);
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation or political instability in particular foreign markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenues, and other obligations related to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the U.S.;
- potential liability under the U.S. Foreign Corrupt Practices Act or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in foreign countries that do not respect and protect intellectual property rights to the same extent as the U.S.; and
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad.

These and other risks associated with international operations may compromise our ability to achieve or maintain profitability.

We may not be able to anticipate the demand for and appropriate supply of Endari®.

We monitor our distributors' inventories of Endari® using a combination of methods. However, our estimates of distributor inventories may differ significantly from actual inventory levels. Significant differences between actual and our estimated inventory levels may result in excessive production (requiring us to hold substantial quantities of unsold inventory which may result in the establishment of inventory reserves or actual write offs of expired inventory), inadequate supplies of products in distribution channels, insufficient product available at the retail level, and unexpected increases or decreases in

orders from our specialty distributors. These changes may cause our revenues to fluctuate significantly from quarter to quarter, and in some cases may cause our operating results for a quarter to be below our expectations or the expectations of securities analysts or investors. In addition, we offer price discounts to our customers in advance of Endari® price increases or as an incentive for bulk or advance orders of Endari®. Such discounts may result in specialty distributor purchases exceeding current demand, resulting in reduced specialty distributor purchases in later periods and substantial fluctuations in our results of operations from period to period. If our financial results are below analysts' or investors' expectations or cannot be reliably estimated, the market price of our common stock may be adversely affected.

If the single manufacturer of prescription-grade L-glutamine or, as happened recently the single packager upon which we rely for our finished goods inventory of Endari®, fails to produce in the volumes and quality that we require on a timely basis or fails to comply with stringent regulations applicable to pharmaceutical manufacturers, we may face interruptions in sales of, or be unable to meet demand for, Endari® and may lose potential revenues.

We do not currently have our own manufacturing capabilities and depend upon a single Japanese supplier, Ajinomoto Aminoscience, LLC, or Ajinomoto, for commercial supplies of Endari®. We intend to continue to rely on Ajinomoto to produce our PGLG, but we have not entered into, and may not be able to establish, long-term supply agreements with this key supplier on acceptable terms. If Ajinomoto were to experience any manufacturing or production difficulties producing PGLG, or we were unable to purchase sufficient quantities of PGLG on acceptable terms, it could interrupt sales of Endari® and have a material, adverse effect on our results of operations and financial condition.

We also rely upon a single packager of Endari®, with which we have no firm commitment to continue its services. The packager repeatedly delayed the scheduled packaging of Endari® beginning in December 2023, which resulted in a severe shortage of finished goods inventory and materially, adversely affected our Endari® sales in 2024. Although we believe we have sufficient finished goods inventory on hand for at least the first half of 2025, we are seeking a new source of packaging to avoid similar problems in the future. There is no assurance that we can retain suitable packaging sources or, if we do, that we will not experience delays in the production of finished goods or future shortages of Endari®.

In addition, all manufacturers, packagers, distributors and suppliers of pharmaceutical products must comply with applicable cGMP regulations for the manufacture of pharmaceutical products, which are enforced by the FDA through its facilities inspection program. If our manufacturers and key suppliers are not in compliance with cGMP requirements, it may result in a delay of approval for products undergoing regulatory review or the inability to meet market demands for any approved products, particularly if these sites supply single source ingredients required for the manufacture of any potential product. Furthermore, each manufacturing facility used to manufacture drug or biological products is subject to FDA inspection and must meet cGMP requirements. As a result, if one of the manufacturers that we rely on shifts production from one facility to another, the new facility must undergo a preapproval inspection and, for biological products, must be licensed by regulatory authorities prior to being used for commercial supply. A failure to comply with any applicable manufacturing requirements, including cGMP requirements, could delay or prevent the promotion, marketing or sale of our products. If the FDA or any other applicable regulatory authorities do not approve the facilities for the manufacture of Endari® or if they withdraw any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to commercially supply Endari®.

If the safety of any quantities supplied is compromised due to a third-party manufacturer's failure to comply with or adhere to applicable laws or for other reasons, we may be liable for injuries suffered by patients who have taken such products and we may not be able to obtain regulatory approval for or successfully commercialize our products.

Endari® may cause undesirable side effects or have other unexpected properties that could result in post-approval regulatory action.

The most common side effects seen with Endari® included constipation, nausea, headache, pain in the stomach area, cough, pain in the hands or feet, back pain, and chest pain. If we or others identify previously unknown undesirable side effects, or other previously unknown problems, caused by Endari® or other products with the same or related active ingredients, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw their approval of Endari®;
- we may need to recall Endari®;
- we may need to add warnings or narrow the indication in the product label or to create a Medication Guide outlining the risks of such side effects for distribution to patients;

- we may be required to change the way Endari® is administered or modify Endari® in some other way;
- the FDA may require us to conduct additional clinical trials or costly post-marketing testing and surveillance to monitor the safety or efficacy of the product;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of the above events resulting from undesirable side effects or other previously unknown problems could prevent us from achieving or maintaining market acceptance of Endari® and could substantially increase the costs of commercializing Endari®.

We face potential product liability exposure relating to Endari® and, if successful claims are brought against us, we may incur substantial liability if our insurance coverage for those claims is inadequate.

The commercial use of Endari® will expose us to the risk of product liability claims despite the fact it is approved for commercial sale by the FDA and manufactured in facilities licensed and regulated by the FDA. Any side effects, manufacturing defects, misuse or abuse associated with Endari® could result in injury to a patient or even death and product liability claims against us. In addition, a liability claim may be brought against us even if Endari® merely appears to have caused an injury. Product liability claims may be brought against us by consumers, health care providers, pharmaceutical companies or others selling or otherwise coming into contact with Endari® and we could incur substantial liabilities.

In addition, regardless of merit or eventual outcome, product liability claims may result in:

- decreased demand for Endari®;
- impairment of our business reputation;
- recall or withdrawal of Endari® from the market;
- costs related to litigation;
- distraction of management's attention from our business;
- substantial monetary awards to patients or other claimants; or
- loss of revenues.

We maintain product liability insurance coverage and carry commercial excess and umbrella coverage, but our insurance coverage may not be sufficient to cover product liability related expenses or losses or cover us for any consequential expenses or losses we may suffer. We may not be able to continue to maintain insurance coverage at a reasonable cost, in sufficient amounts or upon adequate terms to protect us against losses due to product liability. Large judgments have been awarded in class action or individual lawsuits based on drugs that had unanticipated side effects, including side effects that are less severe than those of Endari®. Successful product liability claims against us could cause the value of our common stock to decline and, if judgments exceed our insurance coverage, reduce our cash and have a material adverse effect on our business, results of operations, financial condition and prospects.

We will need to attract and retain sufficient talented employees and scientific collaborators.

Historically we have utilized, and continue to utilize, part-time outside consultants to perform certain tasks, including tasks related to accounting and finance, compliance programs, clinical trial management, legal and regulatory affairs, formulation development and other drug development functions. Our growth strategy related to Endari® may entail expanding our use of consultants to implement these and other tasks going forward. There can be no assurance that we will be able to manage our existing consultants or engage other competent consultants, as needed, on economically reasonable terms.

Our business and operations may be adversely affected by information technology ("IT") system failures or cybersecurity or data breaches.

We rely on IT networks and systems, including those of third-party service providers, to collect, process, store and transmit confidential information including, but not limited to, personal information and intellectual property for a variety of functions including, but not limited to, conducting clinical trials, financial reporting, data and inventory management. We

also outsource certain services, including recruiting services, call center services, contract sales organization services and other ancillary services relating to the commercial marketing and sale of Endari® in the U.S., as well as significant elements of our IT security systems, as a result, our service providers have access to our confidential information.

Despite the implementation of security measures and recovery plans, our network and information systems and those of third-party service providers may be vulnerable to damage from computer viruses, cyberattacks, physical or electronic break-ins, service disruptions, and security breaches from inadvertent or intentional actions by our employees or vendors, or from attacks by malicious third parties. While we have not experienced any such system failure or security breach to date, if such an event were to occur, our operations may be disrupted, and we may suffer from economic loss, reputational harm, regulatory actions or other legal proceedings. Further, such breaches and other inappropriate access can be difficult to detect, and any delay in identifying them may lead to increased risks of the actions described above. We expect that risks and exposures related to cybersecurity breaches will remain high for the foreseeable future due to the rapidly evolving nature and sophistication of these threats.

We have identified material weaknesses in our internal controls over financial reporting and governance matters.

We have experienced historical material weaknesses in our internal controls over financial reporting and governance matters, and in connection with the preparation of this Annual Report, our management concluded that there continue to be material weaknesses in our disclosure controls and procedures as described in more detail in Part II – Item 9A "Controls and Procedures" in this Annual Report. We cannot guarantee when our disclosure controls and procedures will be fully effective or that we will not identify other material weaknesses in the future. Any material weaknesses in our internal control over financial reporting and governance matters could result in errors in our consolidated financial statements or misappropriation of assets, which could erode market confidence in our company, adversely affect the market price of our common stock and, in egregious circumstances, result in possible securities law claims based upon such financial statements.

Our business may be adversely impacted by the consequences of Russia's invasion of Ukraine or conflicts in the MENA region.

The United States, the U.K. and the EU governments, among others, have instituted various sanctions and export-control measures in response to Russia's invasion of Ukraine, including comprehensive financial sanctions, targeted at Russia or designated individuals and entities with direct or indirect business interests or government connections to Russia or those involved in Russian military activities. Governments have also enhanced export controls and trade sanctions targeting Russia's imports of goods. Our sales of Endari® in the MENA region also could be adversely affected by the Isreal-Palestinian conflict or outbreaks of conflicts elsewhere in the region. The duration and intensity of these conflicts, or their possible spread, and their potential impact on our business or operations is uncertain, but it is possible that our business and operations could be adversely affected.

Risks Related to Our Intellectual Property

We may not be able to obtain and enforce intellectual property rights that cover our commercial activities or are sufficient to prevent third parties from competing against us.

In addition to seeking patents for our intellectual property, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, in our business. We seek to protect our trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and remedies thereunder may not be adequate. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time consuming, and the outcome is unpredictable. Some courts inside and outside the U.S. are less willing or unwilling to protect trade secrets. In addition, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us.

Although we expect all our employees to assign their inventions to us, and all our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information or technology to enter into confidential information and invention agreements, we cannot provide any assurances that all such agreements have been duly executed or will be enforceable.

We will depend on licenses of certain patents for the resumption of development of some of our product candidates. If any of these licenses terminate, or if any of the licensed patents is successfully challenged, we may be unable to continue the development of the affected product candidates.

Our ability to develop certain product candidates will depend on an exclusive license we have obtained to patents that claim the use of Kainos's KM10544 IRAK4 inhibitor to treat cancers. The license could be terminated if we fail to satisfy our obligations under the license. In the event any claims in the patents that we have been licensed are challenged, the court or patent authority could determine that such patent claims are invalid or unenforceable or not sufficiently broad in scope to protect our proprietary rights. As the licensee of such patents, our ability to participate in the defense or enforcement of such patents could be limited.

Risks Related to Regulatory Oversight of Our Business and Compliance with Law

Endari® is subject to ongoing and continued regulatory review, compliance with which may result in significant expense and limit our ability to commercialize Endari®.

We are subject to ongoing FDA obligations and continued regulatory review with respect to the manufacturing, processing, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for Endari®. These requirements include submission of safety and other post-marketing information and reports, as well as continued compliance with good clinical practices and good laboratory practices or cGMPs. In addition, our product advertising and promotion are subject to regulatory requirements and continuing regulatory review. The FDA strictly regulates the promotional claims that may be made about prescription drug products. In particular, a drug product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling, although the FDA does not regulate the prescribing practices of physicians.

Manufacturers of drug products and their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP regulations. If we or a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where, or processes by which, the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturer or us, including requiring product recall, notice to physicians, withdrawal of the product from the market or suspension of manufacturing.

The FDA's regulations, policies or guidance may change, and new or additional statutes or government regulations may be enacted that could further restrict or regulate post-approval activities relating to our commercialization of Endari®. We cannot predict the likelihood, nature or extent of adverse government regulation that may arise from future legislation or administrative action. If we are not able to achieve and maintain regulatory compliance, we may not be permitted to market Endari®, which would adversely affect our ability to generate revenue and achieve or maintain profitability.

There are various uncertainties related to the research, development and commercialization of Kainos's KM10544 IRAK4 inhibitor to treat cancers and the cell sheet engineering regenerative medicine products we are developing which could negatively affect our ability to commercialize such products.

We have historically focused on the research and development of our PGLG treatment for SCD and have little or no experience in the research, development or commercialization of potential cancer treatments such as Kainos's KM10544 IRAK4 inhibitor or cell sheet regenerative medicine products or any other biological product. We are not aware of any clinical trials of cell sheet regenerative products in the U.S. or of any biological products based on cell sheet engineering that have been approved by regulatory authorities in any jurisdiction. Such products must be manufactured in conformance with current cGMP requirements as well as Good Tissue Practice ("GTP") requirements and demonstrate that they are safe, pure and potent to be effective for their intended uses to obtain FDA approval. The GTP requirements, which are specifically applicable to all cellular-based products, are intended to prevent communicable disease transmission. It is uncertain what type and quantity of scientific data would be required to support initiation of clinical studies or to sufficiently demonstrate the safety, purity and potency of cell sheet regenerative medicine products for their intended uses. Such uncertainties could delay our ability to obtain FDA approval for and to commercialize such products. In addition, the research and commercialization of cell sheet regenerative medicine products could be hindered if third-party manufacturers of such products are not compliant with cGMP, GTP, and any other applicable regulations. Any delay in the development of, obtaining FDA approval for, or the occurrence of any problems with third-party manufacturers of cell sheet regenerative medicine products would negatively affect our ability to commercialize such products.

We are subject to numerous complex regulations and failure to comply with these regulations, or the cost of compliance with these regulations, may harm our business.

The research, testing, development, manufacturing, quality control, approval, labeling, packaging, storage, recordkeeping, promotion, advertising, marketing, distribution, possession and use of Endari® are subject to regulation by numerous governmental authorities in the U.S. The FDA regulates drugs under the Federal Food, Drug and Cosmetic Act and implementing regulations. Noncompliance with any applicable regulatory requirements can result in refusal to approve products for marketing, warning letters, product recalls or seizure of products, total or partial suspension of production, prohibitions or limitations on the commercial sale of products or refusal to allow the entering into of federal and state supply contracts, fines, civil penalties and/or criminal prosecution. Additionally, the FDA and comparable governmental authorities have the authority to withdraw product approvals that have been previously granted. Moreover, the regulatory requirements relating to Endari® may change from time to time, and it is impossible to predict what the impact of any such changes may be.

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 Endari®.

In the U.S., legislative and regulatory changes to the healthcare system could affect our future results of operations and the future results of operations of our potential customers. For example, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 established a Part D prescription drug benefit, under which Medicare beneficiaries can obtain prescription drug coverage from private sector plans that are permitted to limit the number of prescription drugs that are covered in each therapeutic category and class on their formularies. If Endari® is not widely included on the formularies of these plans, our ability to market Endari® may be adversely affected.

Furthermore, there have been and continue to be 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 Health Care Act of 2010, as amended by the Health Care and Education Affordability Reconciliation Act of 2010 (jointly, the "PPACA"), which includes measures to significantly change the way health care is financed by both governmental and private insurers. Among the provisions of the PPACA of importance to the pharmaceutical industry are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, retroactive to January 1, 2010, to 23% and 13% of the average manufacturer price for most branded and generic drugs, respectively;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D (the required discount was increased to 70% on January 1, 2019 pursuant to subsequent legislation);
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for certain individuals with income at or below 133% of the Federal Poverty Level, thereby potentially increasing both the volume of sales and manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- new requirements to report certain financial arrangements with physicians and teaching hospitals, as defined in the PPACA and its implementing regulations, including reporting any "transfer of value" made or distributed to teaching hospitals, prescribers, and other healthcare providers and reporting any ownership and investment interests held by physicians and their immediate family members and applicable group purchasing organizations during the preceding calendar year, with data collection required and reporting to the CMS required by the 90th day of each calendar year;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians;

- expansion of health care fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- a licensure framework for follow-on biologic products;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- creation of the Independent Payment Advisory Board which, beginning in 2014, will have authority to recommend certain changes to the Medicare program that could result in reduced payments for prescription drugs and those recommendations could have the effect of law even if Congress does not act on the recommendations; and
- establishment of a Center for Medicare Innovation at the CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

Additionally, individual states have become increasingly aggressive in passing legislation and implementing 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 encourage importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm out business, results of operations, financial condition and prospects.

In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This may reduce demand for Endari® or put pressure on our product pricing, which could negatively affect our business, results of operations, financial condition and prospects.

The commercial success of Endari® will depend, in part, upon the availability of coverage and reimbursement from third-party payors at the federal, state and private levels. Third-party payors include governmental programs such as Medicare or Medicaid, private insurance plans and managed care plans. These third-party payors may deny coverage or reimbursement for a product or therapy in whole or in part if they determine that the product or therapy was not medically appropriate or necessary. Also, third-party payors have attempted to control costs by limiting coverage through the use of formularies and other cost-containment mechanisms and the amount of reimbursement for particular procedures or drug treatments.

Additionally, given recent federal and state government initiatives directed at lowering the total cost of healthcare, Congress and state legislatures will likely continue to focus on healthcare reform, the cost of prescription drugs and the reform of the Medicare and Medicaid programs. While we cannot predict the full outcome of any such legislation, it may result in decreased reimbursement for prescription drugs, which may further exacerbate industry-wide pressure to reduce prescription drug prices. This could harm our ability to market Endari® and generate revenues. In addition, legislation has been introduced in Congress (the Affordable and Safe Prescription Drug Importation Act) that, if enacted, would permit more widespread importation or re-importation of pharmaceutical products from foreign countries into the U.S., including from countries where the products are sold at lower prices than in the U.S. Such legislation, or similar regulatory changes, could lead to a decision to decrease our prices to better compete, which, in turn, could adversely affect our business, results of operations, financial condition and prospects. It is also possible that other legislative proposals having similar effects will be adopted.

Furthermore, regulatory authorities' assessment of the data and results required to demonstrate safety and efficacy 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 unfavorable to our business prospects.

If we fail to comply with federal and state healthcare laws, including fraud and abuse and health information privacy and security laws, we could face substantial penalties and our business, results of operations, financial condition and prospects could be adversely affected.

As a pharmaceutical company, even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors, certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights are and will be applicable to our business. We could be subject to healthcare fraud and abuse and patient privacy regulation by both the federal government and the states in which we conduct our business. The laws that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which constrains out marketing practices, educational programs, pricing policies, and relationships with healthcare providers or other entities, by prohibiting, among other things, soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce, or in return for, either the referral of an individual or the purchase or recommendation of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;
- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment from Medicare, Medicaid, or other third-party payors;
- the federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), which created new federal criminal statutes that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 ("HITECH"), and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information; and
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available under the U.S. federal Anti-Kickback Statute, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If we or our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from participation in U.S. federal or state health care programs, and the curtailment or restructuring of our operations. Any penalties, damages, fines, curtailment or restructuring of our operations could materially adversely affect our ability to operate our business and our financial results.

The FDA provides guidelines with respect to appropriate promotion and continuing medical and health education activities. Although we endeavor to follow these guidelines, the FDA or the Office of the Inspector General: U.S. Department of Health and Human Services may disagree, and we may be subject to significant liability, including civil and administrative remedies as well as criminal sanctions. In addition, management's attention could be diverted, and our reputation could be damaged.

Although compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, the risks cannot be eliminated entirely. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal and state privacy, security and fraud laws may prove costly.

Risks Related to Our Investment in EJ Holdings, Inc.

EJ Holdings has no revenues and we have ceased funding its business and operations, and there is no assurance that it can obtain needed funding or that it will be able to continue its activities.

EJ Holdings, Inc., or EJ Holdings, a Japanese corporation that was 40% owned by us, is engaged in seeking to refurbish and phase in its amino acid manufacturing plant in Ube, Japan with the objective of eventually obtaining regulatory clearances for the manufacture of PGLG in accordance with cGMP. EJ Holdings has had no revenues since its inception and, has depended on loans from us to acquire the Ube plant and fund its operations. In September 2023, we suspended further loans to EJ Holdings and in December 2023 we sold and assigned our equity interest in EJ Holdings at our cost to Niihara International, Inc., which was formed by Yutaka Niihara, M.D., Ph.D., our former Chairman and Chief Executive Officer and one of our principal stockholders. EJ Holdings will be dependent on equity or loan financing from Niihara International, Inc. or other financing sources to continue its activities. If EJ Holdings fails to obtain needed funding, it may need to suspend activities at the Ube plant. In that event, EJ Holdings would be unable to repay some or all of our loans.

EJ Holdings may not be able to obtain needed financing or repay our loans.

As of December 31, 2024, we had loans receivable from EJ Holdings totaling approximately $25.8 million. EJ Holdings will need to raise substantial debt or equity financing to fund its activities to refurbish the plant and the plant's operations if the phase-in of the plant is completed, including, but not limited to, maintaining the physical plant and maintaining regulatory approvals for the manufacture of its products. To the extent EJ Holdings raises additional debt financing, its ability to repay our loans may be adversely affected.

We have disposed of our former equity interest in EJ Holdings, which may increase the risk that our loans to EJ Holdings will not be repaid.

In December 2023, we sold and assigned our former equity interest in EJ Holdings at our cost to Niihara International, Inc. which was formed by Yutaka Niihara, M.D., Ph.D., our former Chairman and Chief Executive Officer and a principal stockholder of the company. In January 2024, Japan Industrial Partners, or JIP, which owned 60% of EJ Holdings, also disposed of its equity interest in EJ Holdings to Niihara International, Inc. We and JIP have no influence over the management or operation of EJ Holdings. To the extent that EJ Holdings incurs secured or unsecured debt financing to sustain its activities at the Ube plant, it may be unable to repay some or all our loans as they come due in 2027 and 2028.

If EJ Holdings fails to reactivate its plant and obtain customers, it may not be able to sell its plant and property and repay some or all our loans to EJ Holdings.

If EJ Holdings fails to reactivate the Ube plant or to secure customers for its products, it may need to sell its plant and property. There is no assurance that it will be able to do so at an attractive price or at all. Our loans to EJ Holdings are general unsecured obligations of EJ Holdings, and we have no mortgage or other security interest in the plant or other property of EJ Holdings. Depending on the price at which the plant and property can be sold if it becomes necessary, EJ Holdings may be unable to repay some or all of our loans.

Risks Related to Our Securities

We have been delinquent in our past SEC reporting obligations, and if we fail to timely file our future SEC reports, our security holders and prospective investors will not have current information regarding our financial statements and status of our business and operations and our common stock may no longer be eligible for quotation on the OTC Markets Group, Inc.

We were unable to timely file with the SEC our Annual Report for 2023 due to the complex accounting for the disposition of our former equity interest in EJ Holdings. Due to the delay in filing the Annual Report, we also were unable to timely file our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2024 and June 30, 2024. Prior to that time, we also were unable to timely file with the SEC our Annual Reports on Form 10-K for the years ended December 31, 2019 and December 31, 2020 and our Quarterly Reports on Form 10-Q for 2020 or our Quarterly Report for the quarter ended March 31, 2021. Our failure to timely file our periodic SEC reports adversely affects the ability of our security holders and prospective investors to have current information regarding our financial statements and status of our business and operations and is likely to have adversely affected the liquidity and trading prices of our common stock. Under applicable rules of the Financial Industry Regulatory Authority, or FINRA, our failure to timely our periodic reports with the SEC may result in the disqualification of our common stock for quotation on the OTC Markets Group, Inc. In such event, there may be no established trading market for our common stock unless and until we comply with our SEC reporting obligations and our common stock once again becomes eligible for quotation on the OTC Markets Group, Inc. or is listed on a national securities exchange.

We have experienced, and may continue to experience, significant volatility in our stock price.

The trading price for our common stock has historically been volatile and traded at higher or lower prices that are seemingly uncorrelated with our results of operations, financial condition or prospects. Between January 1, 2024 and December 31, 2024, the closing sale price of our common stock as reported on the OTC Markets Group, Inc. ranged from a low of $0.0001 to a high of $0.13 and may continue to exhibit volatility. Factors such as the following may affect the volatility in our stock price:

- our quarterly operating results;
- marketing approvals or disapprovals or other developments regarding Endari® or competing products;
- announcements of regulatory developments or technological innovations by us or our competitors;

- changes in our relationship with our vendors, distributors or other strategic partners; and
- government regulation of drug pricing.

We may be particularly vulnerable to volatility caused by these conditions or events, as we have only a single product and no ongoing product development efforts and thin trading volume in our common stock.

Trading on the OTC Markets is volatile and sporadic, which could depress the market price of our common stock and make it difficult for our investors and stockholders to resell their common stock.

Public quotations for our common stock are available on the OTCQB tier of the OTC Markets. Trading in securities quoted on the OTC Markets is often thin and characterized by wide fluctuations in trading prices due to many factors, some of which may have little to do with our operations or business prospects. This volatility could depress the market price of our common stock for reasons unrelated to our business or operating performance. Moreover, the OTC Markets is not a stock exchange, and trading of securities on the OTC Markets is often more sporadic than the trading of securities listed on a quotation system such as The Nasdaq Capital Market or a stock exchange like the NYSE American. These factors may result in investors having difficulty purchasing and reselling shares of our common stock.

Our outstanding warrants and convertible promissory notes may result in dilution to our stockholders.

Certain of our outstanding warrants to purchase a total of up to approximately 2,375,000 shares of our common stock provide for a so-called full-ratchet anti-dilution adjustment in the event we sell or issue shares of common stock or common stock equivalents at an effective price less than the exercise price of such warrants, subject to certain exceptions. As of December 31, 2024, we also had outstanding approximately $11.9 million principal amount of convertible promissory notes which are convertible into shares of our common stock at a conversion price of $0.03 per share, subject to possible future reductions on a quarterly basis in the event the prevailing trading price of our common stock is less than the then-conversion price. The anti-dilution adjustments of our outstanding warrants would be triggered by future issuances by us of shares of our common stock upon conversion of the convertible promissory notes, or otherwise, at a price per share below the then-exercise price of such warrants, which adjustments would have a further dilutive effect on our stockholders.

Stockholders may experience future dilution from future financings.

To raise additional capital in the future we may sell and issue additional shares of our common stock or securities convertible into or exchangeable for our common stock, which sales would have a dilutive effect on the percentage ownership of our existing stockholders.

A substantial number of shares of common stock may be sold in the market, which may depress the market price for our common stock.

Sales of a substantial number of shares of our common stock in the public market, or the possibility of such sales upon the exercise or conversion of our outstanding warrants or convertible promissory notes, could cause the market price of our common stock to decline or serve to depress the market price of our common stock. A substantial majority of the outstanding shares of our common stock are, and the shares of common stock issuable upon the exercise of our outstanding warrants and other convertible securities or shares which may be sold in future offerings by us will be, freely tradable without restriction or further registration under the Securities Act.

Our common stock is not traded on a national securities exchange, which may adversely affect our ability to raise needed financing.

The OTC Markets is not a national securities exchange within the meaning of federal and state securities laws, so our common stock is not eligible for the exemption from state securities, or "blue sky," laws for "covered securities" within the meaning of the National Securities Markets Improvement Act of 1996, which may adversely affect our ability to sell our securities to raise needed financing and increase transactions costs of such financing.

As long as our common stock is quoted on the OTC Markets, our stockholders may face significant restrictions on the resale of our common stock due to state "blue sky" laws.

Each state has its own securities laws, often called "blue sky" laws, which limit sales of securities to a state's residents, unless the securities are registered in that state or qualify for an exemption from registration and govern the reporting requirements for broker-dealers doing business directly or indirectly in the state. Before a security is sold in a state, there must be a registration in place to cover the transaction, or the transaction must be exempt from registration. The applicable broker must also be registered in that state. As long as our common stock is quoted on the OTCQB, a determination regarding registration will be made by those broker-dealers, if any, who agree to serve as market-makers for our common stock. There may be significant state blue sky law restrictions on the ability of investors to sell, and on purchasers to buy, our common stock. You should therefore consider the resale market for our common stock warrants to be limited, as you may be unable to resell your common stock without the significant expense of state registration or qualification.

We may issue preferred stock in the future, and the terms of the preferred stock may reduce the value of our common stock.

We are authorized to issue up to 15,000,000 shares of preferred stock in one or more series. Our board of directors may determine the terms of future preferred stock offerings without further action by our stockholders. If we issue preferred stock, it could affect your rights or reduce the value of our outstanding common stock. Specific rights granted to future holders of preferred stock may include voting rights, preferences as to dividends and liquidation, conversion and redemption rights, sinking fund provisions, and restrictions on our ability to merge with or sell our assets to a third party.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 1C. CYBERSECURITY

Risk Management and Strategy

We periodically assess risks from cybersecurity threats; monitor our information systems for potential vulnerabilities; and test those systems pursuant to our cybersecurity processes, and practices as part of our overall risk management program. To protect our information systems from cybersecurity threats, we use various security tools that are designed to help identify, escalate, investigate, resolve, and recover from security incidents in a timely manner. Our senior management, in consultation with our third-party information technology, or IT, vendor assesses risks based on probability and potential impact to our business and information systems and processes. Any identified risks that are considered high are monitored and tracked as part of our overall risk management program overseen by our board of directors.

We collaborate with our third-party IT vendor to assess the effectiveness of our cybersecurity prevention and response systems and processes and have not had a need to utilize cybersecurity assessors, consultants or other external cybersecurity experts to assist in the identification, verification, and validation of cybersecurity risks or to support any necessary mitigation plans.

Neither cybersecurity incidents nor cybersecurity threats have materially affected our company, including our business strategy, results of operations, or financial condition. We are not aware of any cybersecurity threats that are reasonably likely to materially affect our company. Refer to the risk factor captioned "*Our business and operations may be adversely affected by information technology ("IT") system failures or cybersecurity or data breaches"* in Part I, Item 1A. "Risk Factors" for additional description of cybersecurity risks and potential related impacts on our Company.

Governance

Our board of directors oversees our risk management process, including as it pertains to cybersecurity risks.

We take a risk-based approach to cybersecurity and have implemented cybersecurity policies and measures in collaboration with our IT vendor that are designed to address cybersecurity threats and incidents. Our IT vendor with oversight from our Chief Executive Officer, Mr. Lee, is currently responsible for the establishment and maintenance of our cybersecurity program, as well as the assessment and management of cybersecurity risks. Our IT vendor has over 25 years of

experience in information security and possesses the requisite expertise and experience expected of such an individual given our company's risk profile.

Mr. Lee provides periodic updates on any cybersecurity incidents and threats to our Board of Directors and to the Audit Committee of our board of directors as such incidents may arise.

ITEM 2. PROPERTIES

Prior to November 2024, we leased 21,293 square feet of office space for our headquarters in Torrance, California, at a base rental of $90,069 per month pursuant to lease, as amended, which was to expire on September 30, 2026. In November 2024, the lease was amended to, among other things, reduce the leased space to 4,639 square feet at a base rental of $18,556 per month and to provide for our upfront payment of approximately $58,483 to fund the cost of demising work on the former leased space. The amended lease will expire on April 1, 2030.

We also lease 1,163 square feet of office space in Dubai, UAE, which lease will expire on June 19, 2026. Rent expense for the years ended December 31, 2024 and 2023 was approximately $1,110,000 and $1,167,000, respectively.

We believe our existing facilities are adequate for our current and planned future operations, and we expect to be able to renew the leases on commercially reasonable terms.

ITEM 3. LEGAL PROCEEDINGS

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON STOCK, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Public quotations for our common stock were available on the OTCQX tier of the OTC Markets until June 11, 2024, when our common stock was relegated to the Pink tier of the OTC Markets for failure to timely file this Annual Report. On or about October 18, 2024, public quotations for our common stock became available on the OTCQB tier of the OTC Markets. The ticker symbol for our common stock is "EMMA." The information reported on the OTC Markets reflect inter-dealer prices, without retail mark-up, mark-down or commission and do not necessarily represent actual transactions.

Holders

As of March 15, 2025, we had approximately 395 stockholders of record.

Dividends

We have never paid cash dividends on our common stock and do not expect to do so in the foreseeable future. The decision whether to pay cash dividends on our common stock will be made by our board of directors in its discretion and will depend on our financial condition, operating results, capital requirements, our ability to satisfy the requirements for paying dividends under the Delaware General Corporation Law and restrictive covenants under our outstanding indebtedness and other factors that the board of directors considers relevant.

Securities Authorized for Issuance under Equity Compensation Plans

The following table provides information as of December 31, 2024, regarding compensation plans, including any individual compensation arrangements, under which our equity securities are authorized for issuance:

Plan Category	Number of Securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders	4,000,000	$ 1.67	419,167
Equity compensation plans not approved by security holders	1,000,000	$ 0.49	—

Recent Sales of Unregistered Securities

None.

Additional Information

Copies of our annual reports, quarterly reports, current reports, and any amendments to those reports are available free of charge on the Internet at www.sec.gov and on our website at www.emmausmedical.com. Such reports are not part of this Annual Report or incorporated by reference herein. All statements made in any of our reports, including all forward-looking statements, are made as of the date of such reports and we do not assume or undertake any obligation to update any of those statements or documents, except as required by law.

ITEM 6. SELECTED FINANCIAL DATA

Not required for a smaller reporting company.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements

The following discussion of our financial condition and results of operations should be read in conjunction with our financial statements and the related notes, and the other financial information included in this Annual Report. This discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements because of various factors, including those set forth under "Risk Factors" or in other parts of this Annual Report.

Company Overview

We are a commercial-stage biopharmaceutical company engaged in the discovery, development, marketing and sale of innovative treatments and therapies, primarily for rare and orphan diseases. Our only product, Endari® (prescription grade L-glutamine oral powder) is approved by the U.S. Food and Drug Administration, or FDA, to reduce the acute complications of sickle cell disease ("SCD") in adult and pediatric patients five years of age and older. In April 2022, Endari® was approved by the Ministry of Health and Prevention in the United Arab Emirates, or U.A.E, in adults and pediatric patients five years of age and older. In November and December of 2022, we received marketing authorizations for Endari® in Qatar and Kuwait, respectively. In May 2023, we received approval for marketing of Endari to treat SCD from the Bahrain National Health Regulatory Authority. In July 2023, we received marketing approval for Endari® in Oman. Application for marketing authorization in the Kingdom of Saudi Arabia, or KSA is pending. While the application is pending, the FDA approval of Endari® can be referenced to allow access to Endari® in the KSA on a named-patient basis.

Endari® is sold in the U.S. through our nonexclusive distributors. Until August 2024, Endari® was marketed and sold in the U.S. by our internal commercial sales team. In August 2024, we reduced our internal sales team and in October terminated the employment of our Chief Commercialization Officer. Endari® is reimbursable by the Centers for Medicare and Medicaid Services, and every state provides coverage for Endari® for outpatient prescriptions to all eligible Medicaid enrollees within their state Medicaid programs. Endari® is also reimbursable by many commercial payors. We have agreements in place with the nation's leading distributors, as well as physician group purchasing organizations and pharmacy benefits managers, making Endari® available at selected retail and specialty pharmacies nationwide.

As of December 31, 2024, our accumulated deficit was $262.6 million, and we had cash and cash equivalents of $1.4 million. Until we can generate sufficient net revenues from Endari® sales, our future cash requirements are expected to be financed through loans from related parties, third-party loans, public or private equity or debt financings or possible corporate collaboration and licensing arrangements. We are unable to predict if or when we will become profitable.

Critical Accounting Estimates and Accounting Policy

Management's discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP"). The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of certain assets, liabilities and expenses. On an ongoing basis, we evaluate these estimates and judgments, including those described below. We base our estimates on our historical experience and on various other assumptions that we believe to be reasonable under the present circumstances. These estimates and assumptions form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates.

While our significant accounting policies are more fully described in Note 2 of the Notes to Financial Statements included in this Annual Report, we believe that the accounting policies discussed below under "Financial Overview" are the most critical to assist you in fully understanding and evaluating our reported financial results and affect the more significant judgments and estimates that we use in the preparation of our financial statements.

Revenues, net

We realize net revenues primarily from sales of Endari® to our distributors and specialty pharmacy providers. Distributors resell our products to other pharmacy and specialty pharmacy providers, health care providers, hospitals, and clinics. In addition to agreements with these distributors, we have contractual arrangements with specialty pharmacy providers, in-office dispensing providers, physician group purchasing organizations, pharmacy benefits managers and government entities that provide for government-mandated or privately negotiated rebates, chargebacks and discounts with

respect to the purchase of our products. These various discounts, rebates, and chargebacks are referred to as "variable consideration." Revenue from product sales is recorded net of variable consideration.

Management estimates variable consideration using the expected-value amount method, which is the sum of probability-weighted amounts in a range of possible transaction prices. Actual variable consideration may differ from our estimates. If actual results vary from the estimates, we adjust the variable consideration in the period such variances become known, which adjustments are reflected in net revenues in that period. The following are our significant categories of variable consideration:

Sales Discounts: We afford our customers prompt payment discounts and additional discounts to encourage bulk orders to generate needed working capital.

Product Returns: We offer our distributors a right to return product principally based upon (i) overstocks, (ii) inactive product or non-moving product due to market conditions, and (iii) expired product. Product return allowances are estimated and recorded at the time of sale.

Government Rebates: We are subject to discount obligations under state Medicaid programs and the Medicare Part D prescription drug coverage gap program. We estimate Medicaid and Medicare Part D prescription drug coverage gap rebates based upon a range of possible outcomes that are probability-weighted for the estimated payor mix. These reserves are recorded in the same period the related revenues are recognized, resulting in a reduction of product revenues and the establishment of a current liability that is included as accounts payable and accrued expenses on our balance sheet. Our liability for these rebates consists primarily of estimates of claims expected to be received in future periods related to recognized revenues.

Chargebacks and Discounts: Chargebacks for fees and discounts represent the estimated obligations resulting from contractual commitments to sell products to certain specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities at prices lower than the list prices charged to distributors. The distributors charge us for the difference between what they pay for the products and our contracted selling price to these specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities. In addition, we have contractual agreements with pharmacy benefit managers who charge us for rebates and administrative fee in connection with the utilization of product. These reserves are established in the same period that the related revenues are recognized, resulting in a reduction of revenues. Chargeback amounts are generally determined at the time of resale of product by our distributors.

Notes Payable, Convertible Notes Payable and Warrants

From time to time, we obtain financing from the sale and issuance of promissory notes or other debt instruments with detachable stock purchase warrants, some of which notes or debt instruments are convertible into shares of our common stock and some of which are issued to related parties. We analyze all of the terms of our notes payable and promissory notes issued with warrants to determine the appropriate accounting treatment, including determining whether embedded derivatives (conversion features, detachable stock purchase warrants and right to purchase common stock) are required to be bifurcated and treated as discount, and the applicable classification of the notes payable and embedded derivative as debt, derivative liabilities, equity or temporary equity (*i.e.*, mezzanine capital).

Direct and incremental costs associated with the issuance of note payables such as legal fees and broker fees, among others, paid to parties are recorded as a reduction of note payable on the consolidated balance sheets. Issuance costs and discounts are amortized over the term of the respective financing agreement using the effective interest methods. Amortization of these amounts is included as a components of interest expenses in the consolidated statements of operation.

Notes payable to related parties, interest expense and accrued interest to related parties are separately identified in our consolidated financial statements. We also disclose significant terms of all transactions with related parties in the notes to our consolidated financial statements.

Share-based Compensation

We recognize compensation expense for share-based compensation awards during the service term of the recipients of the awards. The fair value of share-based awards is calculated using the Black-Scholes-Merton pricing model. The Black-Scholes-Merton model requires subjective assumptions regarding future stock price volatility and expected time to exercise, which greatly affect the calculated values. The expected term of awards granted is calculated using the simplified method allowed under the Securities and Exchange Commission ("SEC") Staff Accounting Bulletin Nos. 107 and 110. The

risk-free rate used to value an award is based on the U.S. Treasury rate as of the date of the award that corresponds to the vesting period of the award.

Fair Value Measurements

We define fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in accordance with ASC 820. We measure fair value under a framework that provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described as follows:

Level 1: Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets.

Level 2: Inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability; and
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

If the asset or liability has a specified (contractual) term, the Level 2 inputs must be observable for substantially the full term of the asset or liability.

Level 3: Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The fair value measurement level of an asset or liability within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. The carrying values of cash and cash equivalents, accounts receivables, other current assets, account payable and accrued expenses, and other current liabilities approximate fair value due to the short-term maturity of those instruments. The fair value of our convertible debt instruments was determined based on Level 2 inputs. The carrying value of the debt was discounted based on allocating proceeds to other financial instruments within the arrangement as discussed in Note 7 to our consolidated financial statements.

The investment in convertible bond, the convertible features on convertible debt instruments and certain outstanding warrants that contain price adjustment provision are remeasured at fair value on a recurring basis using Level 3 inputs. The level 3 inputs in the valuation and valuation methods used are discussed in Note 5, 7 and 8. There are no other assets or liabilities measured at fair value on a recurring basis.

Derivative liability

We evaluate its financial instruments including convertible notes to determine if such instruments are derivatives or contain features that qualify as embedded derivatives in accordance with ASC 815. We apply significant judgment to identify and evaluate terms and conditions in these contracts and agreements to determine whether embedded derivative exists. If all the requirements for bifurcation are met, embedded derivatives are separately measured from the host contract. Bifurcated embedded derivatives are initially recorded at fair value and then remeasure at each reporting period, with change in fair value recognized in the consolidated statements of operations. Bifurcated embedded derivative are classified as separate liability in the consolidated balance sheets.

Related Party Transactions

For a discussion of related party transactions, refer to Note 5,6,7,8, 11, and 12 of the Notes to Consolidated Financial Statement included elsewhere in this Annual Report, which information is incorporated herein by reference.

Financial Highlights

	Years Ended December 31,	
	2024	2023
CONSOLIDATED STATEMENTS OF OPERATIONS (in thousands)		
REVENUES, NET	$ 16,653	$ 29,597
COST OF GOODS SOLD	1,201	1,342
GROSS PROFIT	15,452	28,255
OPERATING EXPENSES		
Research and development	657	1,189
Selling	6,002	8,635
General and administrative	10,687	14,891
Total operating expenses	17,346	24,715
INCOME (LOSS) FROM OPERATIONS	(1,894)	3,540
OTHER INCOME (EXPENSE)		
Loss on debt extinguishment	—	(821)
Change in fair value of warrant derivative liabilities	57	1,195
Change in fair value of conversion feature derivative, notes payable	291	2,773
Realized loss on investment in convertible bond	(544)	(297)
Net loss on equity method investment	—	(1,713)
Gain on restructured debt	1,032	—
Foreign exchange loss	(148)	(1,767)
Interest and other income (net)	274	681
Interest expense	(5,492)	(7,383)
Total other expense	(4,530)	(7,332)
LOSS BEFORE INCOME TAXES	(6,424)	(3,792)
Income tax provision (benefit)	29	(59)
NET LOSS	$ (6,453)	$ (3,733)
NET LOSS PER COMMON SHARE - BASIC AND DILUTED	$ (0.10)	$ (0.07)
WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING BASIC AND DILUTED	63,234,789	53,105,388

Years ended December 31, 2024 and 2023

Net Loss. Net loss increased by $2.7 million, or 73%, to $6.0 million for the year ended December 31, 2024 compared to net loss of $3.7 million for the year ended December 31, 2023. The increase was due primarily to a $12.8 million decrease in gross profit partially offset by decreases of $7.4 million in operating expenses and $2.8 million in other expenses. As of December 31, 2024, we had an accumulated deficit of approximately $262.6 million.

Revenues, Net. Net revenues decreased by $12.9 million, or 44%, to $16.7 million for the year ended December 31, 2024 compared to $29.6 million in 2023 due to a shortage of finished goods inventory during the first half of 2024 and the introduction of a generic version of L-glutamine oral powder following the expiration of the orphan drug exclusivity for Endari® in the U.S. as discussed below.

On July 15, 2024, ANI Pharmaceuticals, Inc., or ANI. announced the launch of its L-Glutamine Oral Powder, a generic version of Endari®, following final approval of its Abbreviated New Drug Application from the U.S. Food and Drug Administration. The introduction of ANI's generic product or other generic versions of L-Glutamine oral powder has adversely affected Endari® sales and is likely to adversely affect the reimbursement rates that Medicare, Medicaid and third-party payors are willing to pay for Endari®, which could have a material, adverse effect on our future sales and net revenues.

The market exclusivity for Endari® for SCD in the U.S. expired in July 2024 and Endari® has no or limited market exclusivity in the MENA region, which lack of exclusivity could adversely affect our Endari® sales and results of operations in the U.S. and the MENA region. We cannot predict whether or when competing generic prescription-grade L-glutamine products may be introduced in the MENA region or what effect the introduction of such products may have on reimbursement rates for Endari® in the MENA region or Endari® sales.

Cost of Goods Sold. Cost of goods sold decreased by $0.1 million, or 11%, to $1.2 million for the year ended December 31, 2024 compared to $1.3 million in 2023. This decrease was primarily due to a decrease in net revenues, partially offset by higher unit cost.

Research and Development Expenses. Research and development expenses decreased by $0.5 million, or 45%, to $0.7 million for the year ended December 31, 2024 compared to $1.2 million in 2023. The decrease was primarily due to our suspension of substantially all research and development activities in late 2023.

Selling Expenses. Selling expenses decreased by $2.6 million, or 30%, to $6.0 million for the year ended December 31, 2024 compared to $8.6 million in 2023. The decrease was due to decreases of $1.6 million in payroll expense, $0.5 million in promotional expenses, and $0.4 million in travel expenses. We expect that our selling expenses will continue to decrease in the U.S. as our exclusivity in Endari® expired but increase in other regions as we expand Endari® marketing and sales activities.

General and Administrative Expenses. General and administrative expenses decreased by $4.2 million, or 28%, to $10.7 million for the year ended December 31, 2024 compared to $14.9 million in 2023. The decrease was primarily due to $1.5 million in payroll related expenses, including shared-based compensation, $0.7 million in transaction cost, $0.5 million in factoring fee, $0.3 million in settlement fee and $0.3 million in travel expenses.

Other Expense. Other expense decreased by $2.8 million, or 38%, to $4.5 million for the year ended December 31, 2024 compared to $7.3 million in 2023. The decrease was primarily due to an increase of $1.0 million in gain on restructured debt and decreases of $1.9 million in interest expenses, $1.7 million in net loss on equity method investment and $1.6 million in foreign exchange loss, partially offset by a $2.5 million change in fair value of conversion feature derivative liability and $1.1 million in change in fair value of warrant derivative liabilities.

Income Tax Provision (Benefit). Income tax provision increased by $88,000 or 149%, to income tax expense of $29,000 for the year ended December 31, 2024 compared to income tax benefit of $59,000 in 2023. A valuation allowance for net deferred tax assets recorded when it is more likely than not that we will not realize these assets through future operations. The valuation allowance decreased by approximately $4.1 million and $1.2 million for the year ended December 31, 2024 and December 31, 2023, respectively. As of December 31, 2024, and 2023, we had no unrecognized tax benefits or position which in the opinion of management would be reversed if challenged by a tax authority.

Seasonality

There may be seasonal variations in our Endari® sales due to factors such as year-end holidays, severe winter weather conditions in certain regions of the U.S., seasonal conditions that may affect medical practices and provider activity, including influenza or the Covid-19 outbreaks that may inhibit patients from seeking treatment for their SCD or filling or refilling prescriptions for Endari® and possibly other factors relating to the timing of patient deductibles and co-insurance limits.

Liquidity and Capital Resources

We realized a net loss of $6.5 million for the year ended December 31, 2024 and anticipate that we will continue to incur net losses for the foreseeable future and until we can generate increased net revenues from Endari® sales. There is no assurance that we will be able to increase our Endari® sales or attain sustainable profitability or that we will have sufficient capital resources repay our existing indebtedness or to fund our operations until we are able to generate sufficient cash flow from operations.

Liquidity represents our ability to pay our liabilities when they become due, fund our business operations and meet our contractual obligations, including repayment of our indebtedness and the purchase of API under our supply arrangements with Telcon, and execute our business plan. Our primary sources of liquidity are our cash balances at the beginning of each period, sales of future receipts to third parties, proceeds from related-party loans and other financing activities. Our short-term and long-term cash requirements consist primarily of working capital requirements, general corporate needs, our contractual obligations to purchase API from Telcon and debt service under our outstanding notes payable.

As of December 31, 2024, we had outstanding $16.1 million in principal amount of convertible promissory notes and $10.6 million in principal amount of other notes payable that are due within a year. Our minimum lease payment obligations were $3.2 million, of which $2.4 million was payable within 12 months.

Our API supply agreement with Telcon provides for an annual API purchase target of $5 million and a target "profit" (*i.e*., gross margin) to Telcon of $2.5 million. To the extent these targets are not met, Telcon may be entitled to payment of the shortfall or to offset the shortfall against the Telcon convertible bond and proceeds thereof that are pledged as collateral to secure our obligations. With our consent, in April 2023 Telcon retained cash collateral and made offsets against the outstanding balance of our Telcon convertible bond for target shortfalls under the API supply agreement for 2022. A similar target shortfall for 2023 was offset in April 2024.

Due to uncertainties regarding our ability to meet our current and future operating and capital expenses, there is substantial doubt about our ability to continue as a going concern for 12 months from the date of filing of this Annual Report as referred to in the "Risk Factors" section of this Annual Report and Note 2 of the Notes to Consolidated Financial Statements included herein. The report of our independent public accounting firm on our financial statements as of and for the year ended December 31, 2024 included in Item 15 of this Annual Report contains a going concern qualification.

Cash Flows

Net cash used in operating activities

Net cash used in operating activities increased by $0.8 million, or 52%, to $2.3million for the year ended December 31, 2024 from $1.5 million for the year ended December 31, 2023. The increase was primarily due to an increase of $2.8 million in net loss and a $4.6 million increase in non-cash adjustments to net loss, partially offset by a $6.6 million decrease in working capital. The increase in non-cash adjustments to net loss was primarily attributable to reductions of $1.9 million in amortization of discount of notes payable and convertible notes payable, $1.7 million in loss on equity method investment and $1.0 million in shared-based compensation, and an increase of $1.0 million in gain on restructured debt.

Net cash provided by (used in) investing activities

Net cash provided by investing activities increased by $2.9 million, or 679%, to $ 2.5 million for the year ended December 31, 2024 from $0.4 million net cash used in investing activities for the year ended December 31, 2023. The increase was primarily due to a $2.6 million decrease in loans to equity method investee, partially offset by increase of $0.3 million in proceeds from the deemed sale of a portion of the Telcon convertible bond from the offset of target shortfalls discussed above.

Net cash provided by (used in) from financing activities

Net cash used in from financing activities increased by $3.8 million, or 155%, to $1.4 million for the year ended December 31, 2024 from net cash provided by financing activities of $2.5 million for the year ended December 31, 2023. The increase was the result of $5.9 million reduction of proceeds received from issuance of promissory notes and convertible notes, partially offset by the reduction of $2.0 million in repayments to promissory notes and convertible notes.

Off-Balance-Sheet Arrangements

We had no off-balance sheet arrangements in the periods presented.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required for a smaller reporting company.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item 8 is incorporated by reference to the information that begins on Page F-1 of this Annual Report.

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

We are responsible for establishing and maintaining disclosure controls and procedures ("DCP") designed to ensure that information required to be disclosed by us in the reports filed by us under the Securities Exchange Act of 1934, as amended, or the Exchange Act, is: (a) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms; and (b) accumulated and communicated to our management, including our principal executive and principal financial officers, to allow timely decisions regarding required disclosures. In designing and evaluating our DCP, we recognize that any controls and procedures, no matter how well designed and implemented, can provide only reasonable assurance of achieving the desired objectives.

We conducted an evaluation pursuant to Rule 13a-15 of the Exchange Act of the effectiveness of the design and operation of our DCP as of December 31, 2024 under the supervision and with the participation of our management, including our principal executive officers and Chief Financial Officer. Based on that evaluation, our principal executive officers and Chief Financial Officer concluded that our DCP were not effective as of December 31, 2024.

Material Weaknesses

As previously reported, our management identified ongoing material weaknesses (the "Material Weaknesses") in our internal control over financial reporting. The Material Weaknesses related to inadequate accounting treatment for complex accounting matters, inadequate financial closing process, segregation of duties, including access control over information technology, especially financial information, inadequate documentation of policies and procedures over risk assessments, internal control and significant account processes, and insufficient entity risk assessment processes.

Since identifying the Material Weaknesses, we took several steps to remediate the Material Weaknesses, including:

- engaging third-party accounting consulting firms to assist us in the review of our application of GAAP to complex debt financing transactions;
- using GAAP Disclosure and SEC Reporting Checklists;
- continuing professional training and academic education on accounting subjects for accounting staff;
- enhancing attention to review controls related to our financial closing process and reporting;
- subscribing to relevant online services and other supplemental internal and external resources relating to SEC reporting; and
- establishing a Disclosure Committee to ensure more effective internal communication regarding significant transactions and our financial reporting.

We implemented an integrated cloud-based enterprise resource planning system to manage our financial information and replace our outdated financial accounting systems and software. As a result of these actions, management has concluded that the certain material weaknesses identified in previous fiscal years have been remediated but that there continued to be material weaknesses in our internal control over financial reporting as of December 31, 2024. In particular, our finance and

financial accounting department is not adequately staffed, which results in not all policies and procedures being properly documented.

During 2023, the Company paid $650,000 in exchange for the promise of a standby letter of credit from foreign sources which was determined to have been fraudulent. In connection with this matter, we identified an additional material weakness related to insufficient board of directors' oversight and a lack of internal governance processes and procedures surrounding the evaluation of and background checks of advisors in foreign jurisdictions where we have less familiarity with laws and business practices.

To address the material weakness related to insufficient board of directors' oversight noted above, our board of directors appointed a Steering Committee of our Co-Presidents at the time and independent directors following the termination of employment of our former Chief Executive Officer and we engaged outside counsel to advise management on additional steps which should be taken to properly vet the Company's advisors and others with which it seeks to do business in the future.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Our 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 GAAP. Our 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 our transactions and our dispositions of the assets, (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 our receipts and expenditures are being made only in accordance with authorizations of our management and directors, and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the 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 risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the criteria set forth in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that our internal control over financial reporting was not effective as of December 31, 2024.

Attestation Report

This Annual Report does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. As a non-accelerated filer, we are not subject to the attestation requirement.

Changes in Internal Control Over Financial Reporting

Except as described above, based on the evaluation of our management as required by paragraph (d) of Rule 13a-15 of the Exchange Act, we believe that there were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Directors and Executive Officers

The following individuals constitute our board of directors and executive officers:

Name	Age	Position
Willis C. Lee, M.S.	64	Chairman of the Board, Chief Executive Officer
Yasushi Nagasaki, C.P.A.	57	Chief Financial Officer
Charles Stark, Pharm.D.	69	Chief Science Officer & EVP of Clinical Development and Medical Affairs
Wei Peu Zen	72	Director
Ian Zwicker	77	Director
Jon Kuwahara	59	Director

Background of Officers and Directors

The following is a summary of the background of each of our directors and executive officers. Except as noted in their respective biographies below, each of our directors and officers became a director or officer as of the completion of our merger transaction with EMI Holding, Inc., or EMI Holding, on July 17, 2019. All directors serve until the next annual meeting of stockholders at which their successor is elected or their earlier resignation or removal as a director. One or more of our directors or officers also serve as directors or officers of one or more of our wholly owned subsidiaries.

Willis C. Lee, M.S. was appointed Chief Executive Office and Chairman of the Board of Directors of the Company on July 15, 2024 and October 2, 2023, respectively. He served as Chief Operating Officer since May 2011 and as a director since December 2015 and served as Vice-Chairman of the board of directors from January 2016 and as Chief Financial Officer from October 2016 to July 2018 of EMI Holding. Mr. Lee also previously served as a director of EMI Holding from May 2011 to May 2014 and again from December 2015 to January 2016. Mr. Lee served as the Co-Chief Operating Officer and Chief Financial Officer and as a director of Emmaus Medical from March 2010 to May 2011. Prior to that time, he was the Controller at Emmaus Medical from February 2009 to February 2010. From 2004 to 2010, Mr. Lee led worldwide sales and business development of Yield Dynamics product group at MKS Instruments, Inc., a provider of instruments, subsystems, and process control solutions for the semiconductor, flat panel display, solar cell, data storage media, medical equipment, pharmaceutical manufacturing, and energy generation and environmental monitoring industries. Prior to that time, Mr. Lee held various managerial and senior positions at various public and private companies in the semiconductor and other industries. Mr. Lee received his B.S. degree and a M.S. degree in Physics from University of Hawaii and University of South Carolina, respectively. We believe Mr. Lee is qualified to serve as a director due to his extensive knowledge and experience, as well as his intimate knowledge of the company through his service as an executive officer of the company and Emmaus Medical.

Yasushi Nagasaki, C.P.A. has served as Chief Financial Officer since September 1, 2020 and served as our Senior Vice President Finance from July 2019 to August 2020. Mr. Nagasaki also served as Senior Vice President Finance from April 2012 to July 2019 and as Chief Financial Officer from May 2011 to April 2012 of EMI Holding, with which we merged in July 2019. From September 2005 until joining EMI Holding, Mr. Nagasaki was the Chief Financial Officer of Hexadyne Corporation, an aerospace and defense supplier. Mr. Nagasaki also served on the board of directors at Hexadyne Corporation from September 2005 to April 2011. From May 2003 to August 2005, Mr. Nagasaki was the Controller at Upsilon Intertech Corporation, an international distributor of defense and aerospace parts and subsystems. Mr. Nagasaki is a Certified Public Accountant and received a B.A. in Commerce from Waseda University and an M.A. in International Policy Studies from the Monterey Institute of International Studies, a graduate school of Middlebury College.

Charles Stark, Pharm.D. was appointed as Executive Vice President and Chief Scientific Officer on November 20, 2023. He previously served as Senior Vice President of Medical Affairs, Clinical, Regulatory since November 23, 2021 and as Senior Vice President of Research and Development since July 19, 2019 and in the same capacity with EMI Holding since 2013. He has more than 30 years of experience in medical affairs, research and academia. Previously, Dr. Stark was Director of Clinical Development at Bavarian Nordic, an immunotherapeutic company, and prior to that Associate Director of Medical Affairs for the Dendreon Corporation, an immunotherapeutic company. He has served as Director, Medical Science Liaisons (cardiovascular, metabolic and oncology) at Pfizer, Inc., a pharmaceutical company. Dr. Stark has served as the Director of Investigational Drug Services and Clinical Research at LA BioMed at Harbor UCLA and at the Health Research Association at USC Medical Center. He has also served as a faculty member at the University of Southern California School of

Pharmacy. Dr. Stark received his Pharm.D. from the University of Southern California and completed his residency at the Veteran's Affairs Medical Center in West Los Angeles.

Wei Peu Zen is the Vice Chairman and Chief Executive Officer of Wai Kee Holdings Limited, a Hong Kong-based construction and infrastructure company whose shares are listed on the Main Board of Hong Kong Stock Exchange. He is also the Chairman, Chief Executive Officer and Managing Director of Build King Holdings Limited, a subsidiary of Wai Kee Holdings Limited. In addition, he is the Chairman of Road King Infrastructure Limited, an associated corporation of Wai Kee Holdings Limited. The shares of both Build King Holdings Limited and Road King Infrastructure Limited are listed on the Main Board of Hong Kong Stock Exchange. Mr. Zen has over 50 years of experience in civil engineering and is responsible for the overall management of Wai Kee Group and oversees the operations of Wai Kee Group. Mr. Zen holds a B.Sc. degree in Engineering from The University of Hong Kong and a M.B.A. degree from The Chinese University of Hong Kong and is a member of both the Institution of Civil Engineers and the Hong Kong Institution of Engineers and a fellow member of the Institute of Quarrying, UK. He is a past Honorary Treasurer of Hong Kong Construction Association and a member of HKTDC Infrastructure Development Advisory Committee. He is also the President of Hong Kong Contract Bridge Association. We believe Mr. Zen is qualified to serve as a director due to his executive experience and business expertise, including in foreign markets. Mr. Zen also brings to the board of directors his diverse experience as a foreign national and board member and executive officer of Hong Kong-based publicly traded companies.

Ian Zwicker was appointed as a director on October 4, 2022. He previously served as a director, Chair of the Compensation Committee and member of the Governance and Nominations Committee of our Board of Directors from the completion of our merger transaction with EMI Holding, Inc. on July 17, 2019, until his retirement as a director in conjunction with our Annual Meeting of Stockholders held on November 23, 2021. He had served as a director of EMI Holding, Inc. since December 7, 2015. Mr. Zwicker is the founder of Zwicker Advisory Group, an independent financial advisory consulting firm, and has been its Chief Executive Officer since 2014. From 1981 to 1990, Mr. Zwicker served as Managing Director and held a variety of management positions at the investment banking firms of SG Cowen and Hambrecht & Quist. From 1990 to 1999, Mr. Zwicker served as Managing Director and head of worldwide technology investment banking for Donaldson, Lufkin & Jenrette Securities Corporation, and from 2000 to 2001 as the President of WR Hambrecht + Co (WRH). He was a Director of Stirling Energy Systems, Inc. from 2006 to 2012. Mr. Zwicker was a Partner at WRH and was also Head of Capital Markets from 2013 to 2014. We believe Mr. Zwicker is qualified to serve as a director due to his prior service on the Board of Directors and standing Board committees and his extensive investment banking and financial expertise and experience.

Jon Kuwahara was appointed as a director and as Chair of the Audit Committee of the Board of Directors on October 1, 2024. He previously served as a director of Emmaus and as Chairman of the Audit Committee and a member of the Corporate Governance and Compensation Committee of the Board from January 20216 to September 2018. He has served as Vice President – Finance of Crinetics Pharmaceuticals, Inc. (NASDAQ: CRNX), San Diego, California, since August 2021. Prior to that time, Mr. Kuwahara served as Senior Vice President – Finance and Administration of Novus Therapeutics, Inc. (NASDAQ: NVUS), Irvine, California, from July 2016 to July 2021 and in senior finance and accounting positions with a number of other life sciences companies. Mr. Kuwahara is a Certified Public Accountant and holds a Bachelor of Business Administration, Accounting, degree from the University of Hawaii at Manoa, Honolulu, Hawaii. We believe Mr. Kuwahara's prior experience with the Company and ongoing expertise and experience in SEC financial reporting and accounting matters makes his well-qualified to serve as a director and Audit Committee member.

Family and Other Relationships

There are no family relationships among any of our officers or directors.

Mr. Zen was originally appointed to the board of directors of EMI Holding on June 18, 2018 pursuant to the terms of outstanding convertible promissory notes dated November 6, 2017 and January 15, 2018 held by Mr. Zen and Wealth Threshold Limited, respectively, which entitled the note holders to designate one director if the aggregate investment in EMI Holding by the note holders and related note holders exceeded $20 million.

Board of Directors and Committees and Director Independence

Our board of directors currently consists of four members. Our board of directors has determined that each of Wei Peu Zen, Ian Zwicker and Jon Kuwahara is an "independent" director as defined by The NASDAQ Marketplace Rules currently in effect and all applicable rules and regulations of the SEC. Both members of the Audit Committee satisfy the "independence" standards of The NASDAQ Marketplace Rules applicable to members of such committee. The board of directors made this affirmative determination regarding these directors' independence based on discussions with the directors and its review of the directors' responses to a standard questionnaire regarding affiliations, family and other relationships and

transactions between each director or any member of his or her immediate family and the Company or its subsidiaries or affiliates.

Audit Committee

Our Audit Committee consists of Mr. Kuwahara and Mr. Zwicker, each of whom is an independent director as defined by The NASDAQ Marketplace Rules. Mr. Kuwahara serves as Chair of the Audit Committee and qualifies as an "audit committee financial expert" as defined under Item 407(d) of Regulation S-K. The purpose of the Audit Committee is to represent and assist our board of directors in its general oversight of our accounting and financial reporting processes, audits of the financial statements and internal control and audit functions. The Audit Committee's primary responsibilities and duties are to:

- Serve as an independent and objective party to monitor the Company's financial reporting process, internal control system and disclosure control system.
- Review and appraise the audit efforts of the company's independent accountants.
- Assume direct responsibility for the appointment, compensation, retention and oversight of the work of the outside auditors and for the resolution of disputes between the outside auditors and the Company's management regarding financial reporting issues,
- Provide an open avenue of communication among the independent accountants, financial and senior management and the board of directors.

The board of directors has adopted a written charter for the Audit Committee. A copy of the Audit Committee Charter is available on our website at www.emmausmedical.com.

Governance and Nominations Committee and Compensation Committee

Our board of directors previously established both a Governance and Nominations Committee and a Compensation Committee, but the activities of the Committees have been suspending pending the possible eventual up listing of our common stock to a national securities exchange. In the meantime, our board of directors as a whole is responsible for the functions of the Committees.

Section 16(a) Beneficial Ownership Reporting Compliance

Our common stock is currently registered under Section 12 of the Securities Exchange Act. As a result, and pursuant to Rule 16a-2, our directors and executive officers and beneficial owners of 10% or more of our common stock are currently required to file statements of beneficial ownership with respect to their ownership of our equity securities under Sections 13 or 16 of the Exchange Act. Based on a review of written representations from our executive officers and directors and a review of Forms 3 and 4 and any Forms 5 furnished to us, we believe that during the fiscal year ended December 31, 2024 our directors and officers filed all reports required by Section 16(a) of the Exchange Act.

Code of Conduct and Ethics

Our board of directors has approved a Code of Conduct and Ethics, which we refer to as the Code of Ethics, which applies to our directors, officers and employees. The Code of Ethics addresses, among other things, honesty and ethical conduct, conflicts of interest, compliance with laws, regulations, and policies, including disclosure requirements under the federal securities laws, confidentiality, trading on inside information, and reporting of violations of the Code of Ethics. A copy of the Code of Ethics is available on our website at www.emmausmedical.com. Requests for copies of the Code of Ethics should be sent to Emmaus License Sciences, Inc., Attention: Secretary, 21250 Hawthorne Boulevard, Suite 800, Torrance, California 90503.

Insider Trading Policy

The Company has adopted insider trading policies and procedures governing the purchase, sale and other disposition of the Company's securities, a copy of which is included as Exhibit 19 to this Annual Report.

ITEM 11. EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth information concerning the compensation earned by our principal executive officers, and our two other most highly compensated executive officers, whom we refer to as our "named executive officers," for the fiscal years ended December 31, 2024 and 2023:

Name and Position	Year ended December 31	Salary	Bonus	Stock Awards	Option Awards	All Other Compensation	Total
Willis C. Lee	2024	233,018	—	—	18,073	—	251,091
Chief Executive Officer	2023	240,000	—	—	80,221	—	320,221
Yasushi Nagasaki	2024	241,257	—	—	18,073	—	259,330
Chief Financial Officer	2023	250,000	—	—	24,066	—	274,066
Charles Stark	2024	202,350	—	—	18,073	—	220,423
Chief Science Officer & EVP of Clinical Development and Medical Affairs	2023	174,831	—	—	16,044	—	190,875
George Sekulich (1)	2024	208,353	—	—	18,073	34,284	260,710
Former Chief Commercial Officer	2023	210,000	—	—	16,044	—	226,044

(1) On October 4, 2024, Mr. Sekulich ceased to serve as our Chief Commercial Officer.

The compensation of Mr. Lee does not reflect annual performance bonuses contemplated by his employment agreement. No specific performance criteria were established for payment of such bonuses for 2024 or 2023.

Outstanding Equity Awards at 2024 Fiscal Year End

The following table sets forth information regarding outstanding equity awards held by our named executive officers as of December 31, 2024:

Name	Number of Securities Underlying Unexercised Awards Exercisable	Number of Securities Underlying Unexercised Awards Unexercisable	Exercise Price	Expiration Date
Willis C. Lee	315,043	—	$ 4.76	5/10/2026
	319,445	180,555	$ 4.50	1/11/2033
	200,000	—	$ 0.15	1/31/2034
Yasushi Nagasaki	315,043	—	$ 4.76	5/10/2026
	95,834	54,166	$ 4.50	1/11/2033
	200,000	—	$ 0.15	1/31/2034
Charles Stark	105,014	—	$ 4.76	5/10/2026
	63,890	36,110	$ 4.50	1/11/2033
	200,000	—	$ 0.15	1/31/2034
George Sekulich (1)	21,002	—	$ 4.76	5/10/2026
	78,760		$ 10.76	8/8/2028
	63,890	36,110	$ 4.50	1/11/2033

(1) On October 4, 2024, Mr. Sekulich ceased to serve as our Chief Commercial Officer.

Employment Agreements

On April 5, 2011, Emmaus Medical, Inc., our indirect wholly owned subsidiary, entered into employment agreement with Mr. Lee. The Employment Agreements had an initial two-year term, which renews automatically for consecutive one-year periods unless we or the officer provides notice of non-renewal at least 60 days prior to the expiration of the then current term.

Base Salary, Bonus and Other Compensation. Mr. Lee's base salary in 2024 was $240,000. In addition to the base salary, each officer may be entitled to receive an annual performance bonus based on the officer's performance. The officers

are also eligible to receive paid vacation and to participate in health and other benefit plans and to be reimbursed for reasonable and necessary business expenses on the same basis as our other employees.

Equity Compensation. The Employment Agreement provides that on December 31 of each calendar year, or as soon as reasonably practicable after such date (each a "Grant Date"), we will grant non-qualified 10-year stock options with a Black-Scholes-Merton value of $50,000 to Mr. Lee with an exercise price per share equal to the "Fair Market Value" (as such term is defined in our 2011 Stock Incentive Plan) on the applicable Grant Date. The options are to vest as to one-third of the option shares on each of the first three anniversaries of the Grant Date. Any unvested options are to vest immediately upon a change in control (as defined below), termination of the officer's employment other than a voluntary termination by the officer or our termination of the officer for cause. In the event the officer is terminated for any reason other than cause, death or disability or retirement, each option, to the extent that it is exercisable at the time of such termination, shall remain exercisable for the 90-day period following such termination, but in no event following the expiration of its term. In the event the officer's employment terminates on account of death, disability or, with respect to any non-qualified stock option, retirement, each option granted that is outstanding and vested as of the date of such termination shall remain exercisable by such officer (or the officer's legal representatives, heirs or legatees) for the one-year period following such termination, but in no event following the expiration of its term. No such stock option grants were made for either of the years ended December 31, 2024 or 2023.

Severance Compensation. If Mr. Lee's employment is terminated for any reason during the term of his Employment Agreement, other than for cause or without good reason, he will be entitled to receive his base salary prorated through the termination date, any expense reimbursement due and owing for reasonable and necessary business expenses, and unpaid vacation benefits (the "Voluntary Termination Benefits"). If Mr. Lee's employment is terminated due to his death or disability during the term of his employment agreement, he will also receive an amount equal to his target annual performance bonus, if any, and in the case of a termination due to disability, six additional months of his base salary to be paid out over a six-month period and payment of COBRA benefits for six months following the termination. If Mr. Lee's employment is terminated without cause or he resigns with good reason (but not within two years following a change in control) during the term of his employment agreement, he will receive the Voluntary Termination Benefits and, subject to his signing a Release if all claims relating to his employment, a severance package equal to six months' base salary to be paid out over a six-month period, an amount equal to half of the targeted annual performance bonus, if any, and payment of COBRA benefits for six months following the termination.

Termination with cause includes a proven act of dishonesty, fraud, embezzlement or misappropriation of company proprietary information; a conviction of, or plea of nolo contendere to, a felony or a crime involving moral turpitude; willful misconduct which cannot be cured on reasonable notice to the officer; or the officer's habitual failure or refusal to perform his duties if such failure or refusal is not cured within 20 days after receiving written notice thereof from the board of directors. Good reason includes a reduction of more than 10% to the officer's base salary or other compensation (except as part of a general reduction for all executive employees); a material diminution of the officer's authority, responsibilities, reporting or job duties (except for any reduction for cause); the company's material breach of the Employment Agreement; or a relocation of the business requiring the officer to move or drive to work more than 40 miles from the location of our former offices. The officer may terminate the Employment Agreement for good reason if he provides written notice to the Company within 90 days of the event constituting good reason and the Company fails to cure the good reason within 30 days after receiving such notice.

Change of Control. Mr. Lee's Employment Agreements will not terminate upon a "change of control," which means any merger or reorganization where the holders of the company's capital stock prior to the transaction own fewer than 50% of the shares of capital stock after the transaction, an acquisition of 50% of the voting power of the company's outstanding securities by another entity, or a transfer of at least 50% of the fair market value of the company's assets. Upon Mr. Lee's termination without cause or for good reason that occurs within two years after a change of control, he will be entitle to receive the Voluntary Termination Benefits and, subject to his signing a Release of all claims relating to his employment, a severance package equal to one year's base salary to be paid out over a 12-month period, an amount equal to the full-year targeted annual performance bonus, if any, payment of COBRA benefits for 12 months following the termination, and a one-time cash payment of $200,000. In addition, Mr. Lee's unvested equity awards will vest upon such termination and he will have 36 months in which to sell or exercise such awards (subject to expiration of the term of such options).

Director Compensation

The following is a summary of the compensation of our non-employee directors for 2024:

- $100,000 cash compensation, payable in quarterly installments.

- possible awards of stock options as determined by the Compensation Committee or the Board.

The following table sets forth information regarding the compensation earned by our non-employee directors for the fiscal year ended December 31, 2024. Our employee directors are not compensated for their services as directors.

Name	Fees Earned or Paid in Cash	Option Awards	Total
Wei Peu Zen	$ 100,000	$ 9,067	$ 109,067
Seah H. Lim, M.D., Ph.D (1)	83,333	$ 9,067	92,400
Ian Zwicker	100,000	$ 9,067	109,067
Jon Kuwahara	25,000	$ —	25,000
Total	$ 308,333	$ 27,201	$ 335,534

(1) Dr. Lim resigned as a director in November 2024.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth certain information as of March 15, 2025 with respect to beneficial ownership of our common stock based on issued and outstanding shares of common stock owned by:

- Each person known to us to be the beneficial owner of 5% or more of our outstanding common stock;
- Each named executive officer;
- Each director; and
- All our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC. In computing the number of shares beneficially owned by a person and the percentage of ownership of that person, shares of common stock subject to options, warrants and convertible notes held by that person that are exercisable on or within 60 days of March 15, 2025 are deemed outstanding. Those shares, however, are not deemed outstanding for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated, the persons and entities named in the table have sole voting and sole investment power with respect to the shares set forth opposite the stockholder's name, subject to community property laws, where applicable.

Unless otherwise indicated in the table or footnotes, the address of each 5% or more owner is c/o Emmaus Life Sciences, Inc., 21250 Hawthorne Boulevard, Suite 800, Torrance, California 90503.

Name of Beneficial Owner	Title	Amount and Nature of Beneficial Ownership of Shares of Common Stock		Percent of Class (1)
Directors and Executive Officers				
Willis C. Lee	Chairman and Chief Executive Officer	1,699,650	(2)	2.6%
Yasushi Nagasaki	Chief Financial Officer	698,812	(3)	1.1%
Charles Stark	Chief Science Officer & Executive Vice President of Clinical Development and Medical Affairs, Clinical, Regulatory	400,975	(4)	*
Jon Kuwahara	Director	—		*
Wei Peu Zen	Director	6,239,031	(5)	9.7%
Ian H. Zwicker	Director	200,000	(6)	*
Officers and Directors as a Group (6 persons)		9,238,468	(7)	13.9%
5% or More Owners				
Yutaka Niihara, M.D., M.P.H.		12,202,851	(8)	19.1%
Telcon RF Pharmaceutical, Inc.		4,147,491	(9)	6.5%
Seah H. Lim		4,147,426	(10)	6.5%

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* Represents beneficial ownership of less than 1%.

(1) Based on 63,865,571 shares of common stock issued and outstanding as of March 15, 2025.

(2) Includes 903,932 shares underlying stock options.

(3) Includes 631,710 shares underlying stock options.

(4) Includes 382,793 shares underlying stock options.

(5) Includes 200,000 shares underlying stock options and 1,270,214 shares owned by Profit Preview International Group Limited, a Hong Kong limited company wholly owned by Mr. Zen. Excludes 521,827 shares owned by Smart Start investments Limited, a Hong Kong corporation and wholly owned subsidiary of Build King Holdings Limited, a Hong Kong stock exchange listed company, of which the Mr. Zen is a director and 9.96% shareholder, and 350,048 shares owned by Top Ability International, Ltd., a Hong Kong corporation and wholly owned subsidiary of Wai Kee Holdings Limited, a Hong Kong stock exchange listed company of which Mr. Zen is a director and 31.45% shareholder, as to which shares Mr. Zen disclaims beneficial ownership.

(6) Includes 200,000 shares underlying stock options.

(7) Includes 2,318,435 shares underlying stock options.

(8) Includes 12,047,057 shares held jointly by Dr. Niihara and Soomi Niihara, his wife, 63,000 shares held by Soomi Niihara and 92,794 shares owned by Hope International Hospice, Inc., or Hope Hospice. Dr. Niihara is the chief executive officer and a co-director of Hope Hospice and shares voting and investment power over such shares. The information for Dr. Niihara, whose address is c/o Hope International Hospice, Inc., 20705 S. Western Avenue, Unit 112 Torrance, CA 90501, is based solely on his Schedule 13D/A filed with the SEC on February 21, 2023 and may not be up to date.

(9) The information regarding Telcon RF Pharmaceutical, Inc. whose address is S-Tower 14th Floor 439 Bongunsa-ro, Gangnam-gu, Seoul, South Korea is based solely on its Schedule 13G filed with the SEC on August 26, 2019.

(10) The information regarding Dr. Lim is based on a Form 13G filed by him with the SEC on February 4, 2025.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Except as described below in this section, since the beginning of our last fiscal year, there has not been, nor is there currently proposed, any transaction or series of similar transactions to which we were a party:

- in which the amount involved exceeds the lesser of $120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years; and
- in which any director, executive officer, or other stockholder of more than 5% of our common stock or any member of their immediate family had or will have a direct or indirect material interest.

Loans by Related Persons

The following table sets forth information relating to loans from related parties evidenced by promissory notes payable and convertible promissory notes payable to related persons outstanding at any time during the fiscal year ended December 31, 2024 (amounts in thousands).

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding December 31, 2024	Highest Principal Outstanding	Amount of Principal Repaid	Amount of Interest Paid
Promissory note payable - related parties:								
	Willis Lee(2)	12%	10/29/2020	On Demand	100	100	—	2
	Soomi Niihara(1)	12%	12/7/2021	On Demand	700	700	—	—
	Hope International Hospice, Inc.(1)	10%	2/9/2022	On Demand	350	350	—	—
	Hope International Hospice, Inc.(1)	10%	2/15/2022	On Demand	210	210	—	—
	Soomi Niihara(1)	10%	2/15/2022	On Demand	100	100	—	—
	Hope International Hospice, Inc.(1)	12%	3/15/2022	On Demand	150	150	—	—
	Hope International Hospice, Inc.(1)	12%	3/30/2022	On Demand	150	150	—	—
	Wei Peu Zen(2)	10%	3/31/2022	On Demand	200	200	—	—
	Albert Niihara(1)	10%	4/4/2022	On Demand	350	500	150	—
	Willis Lee(2)	10%	4/14/2022	On Demand	45	45	—	—
	Albert Niihara(1)	10%	4/19/2022	On Demand	250	250	—	—
	Hope International Hospice, Inc.(1)	10%	5/25/2022	On Demand	40	40	—	—
	Dr. Yutaka and Soomi Niihara(1)	12%	7/27/2022	5 years	402	402	—	44
	Dr. Yutaka and Soomi Niihara(1)	10%	8/16/2022	5 years	250	250	—	23
	Dr. Yutaka and Soomi Niihara(1)	10%	8/16/2022	5 years	1,669	1,669	—	153
	Hope International Hospice, Inc.(1)	10%	8/17/2022	On Demand	50	50	—	—
	Hope International Hospice, Inc.(1)	10%	10/20/2022	On Demand	100	100	—	—
	Hope International Hospice, Inc.(1)	10%	3/17/2023	On Demand	100	100	—	—
	Dr. Yutaka and Soomi Niihara(1)	10%	3/21/2023	On Demand	127	127	—	—
	Wei Peu Zen(2)	60%	12/1/2023	2 months	350	700	350	70
				Total	**$ 5,693**	**$ 6,193**	**$ 500**	**$ 292**

(1) Soomi Niihara is the wife of Dr. Niihara, our former Chairman and Chief Executive Officer. Dr. Niihara is also director and the Chief Executive Officer of Hope International Hospice, Inc.

(2) Officer or director.

The proceeds of the above loans were used working capital and general corporate purposes.

Policy for Approval of Related Party Transactions

The Audit Committee of our Board of Directors is responsible for reviewing and approving all related party transactions.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The following table presents all fees, including reimbursements for expenses, billed for professional services rendered by our principal accountant for the years ended December 31, 2024 and 2023 (in thousands):

	2024		2023
	Marcum	Baker Tilly	Baker Tilly
Audit Fees	$ 90	$ 165	$ 516
Audit–Related Fees	—	—	—
Tax Fees	—	—	—
All Other Fees	—	—	—
Total	$ 90	$ 165	$ 516

The Audit Committee has adopted a formal policy on auditor independence requiring the advance approval by the Audit Committee of all audit and non-audit services provided by our independent registered public accounting firm. In determining whether to approve any services by our independent registered public accounting firm, the Audit Committee reviews the scope of and estimated fees for the services and considers whether the proposed services may adversely affect the firm's independence. On an annual basis, our management reports to the Audit Committee all audit services performed during the previous 12 months and all fees billed by our independent registered public accounting firm for such services.

In fiscal 2024 and 2023, all audit services and the corresponding fees were approved by the Audit Committee.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

1. Financial Statements: See "Index to Consolidated Financial Statements" on page F-1 of this Annual Report.
2. Financial Statement Schedule: See Notes to Consolidated Financial Statements starting on page F-8 of this Annual Report.
3. Exhibits: The exhibits listed in the following "Exhibit Index" are filed or incorporated by reference as part of this Annual Report.

Exhibit Index

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished
		Form	File No.	Exhibit	Filing Date	
3.1	Restated Certificate of Incorporation.	10-K	001-35527	3.1	January 25, 2021	
3.2	Amended and Restated By-Laws.	8-K	001-35527	3.4	July 22, 2019	
4.1	Specimen Common Stock Certificate.	10-K	001-35527	4.1	March 31, 2022	
4.2+	Emmaus Life Sciences, Inc. 2021 Incentive Plan	DEF14A	001-35527	Annex B	October 12, 2021	
4.3+	Form of Incentive Stock Option Agreement under 2021 Stock Incentive Plan	S-8	001-35527	4.2	December 30, 2021	
4.4+	Form of Non-Qualified Stock Option Agreement under 2021 Stock Incentive Plan (Non-Employee Director Grantee)	S-8	001-35527	4.3	December 30, 2021	
4.5+	Form of Non-Qualified Stock Option Agreement under 2021 Stock Incentive Plan (Non-Director Grantee)	S-8	001-35527	4.4	December 30, 2021	
4.6+	Emmaus Life Sciences, Inc. Amended and Restated 2011 Equity Incentive Plan.	DEF14A	000-53072	Annex A	September 19, 2014	
4.7+	Form of Incentive Stock Option Agreement (Time-Based and Performance-Based Vesting) under 2011 Stock Incentive Plan.	8-K	000-142031	10.3a	May 4, 2011	
4.8+	Form of Incentive Stock Option Agreement (Time-Based Vesting) under 2011 Equity Incentive Plan.	8-K	000-142031	10.3b	May 4, 2011	
4.9+	Form of Non-Qualified Stock Option Agreement (Time-Based and Performance-Based Vesting) under 2011 Equity Incentive Plan.	8-K	000-142031	10.3c	May 4, 2011	
4.10+	Form of Non-Qualified Stock Option Agreement (Time-Based Vesting) under 2011 Equity Incentive Plan.	8-K	000-142031	10.3d	May 4, 2011	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished
		Form	File No.	Exhibit	Filing Date	
4.11+	Form of the Restricted Stock Agreement (Time-Based and Performance-Based Vesting) under 2011 Equity Incentive Plan.	8-K	000-142031	10.3e	May 4, 2011	
4.12+	Form of Restricted Stock Agreement (Time-Based Vesting) under 2011 Equity Incentive Plan.	8-K	000-142031	10.3f	May 4, 2011	
4.13	Contingent Common Stock Purchase Warrant	10-K	001-35527	4.24	May 4, 2021	
4.14	Form of July 31, 2020 Common Stock Purchase Warrants	10-K	001-35527	4.25	May 4, 2021	
4.15	Form of September 22, 2020 Common Stock Purchase Warrants	8-K	001-35527	10.1	September 24, 2020	
4.16	Form of October 8, 2020 Common Stock Purchase Warrants	10-K	001-35527	4.27	May 4, 2021	
4.17	Form of Common Stock Purchase Warrants dated as of January 11, 2023	8-K	001-35527	4.1	March 7, 2023	
4.18	Common Stock Purchase Warrant dated January 27, 2023	8-K	001-35527	4.3	March 7, 2023	
4.19	Convertible Promissory Note dated September 5, 2023	10-Q	001-35527	4.1	November 14, 2023	
4.20	Form of Convertible Promissory Note Due February 24, 2025	8-K	001-35527	4.1	February 26, 2024	
10.1	Loan Agreement dated as October 3, 2018 between EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) and EJ Holdings, Inc.	10-Q	001-35527	10.7	November 13, 2019	
10.2+	Executive Employment Agreement dated as of April 5, 2011 between Emmaus Medical, Inc. and Willis Lee.	8-K	000-142031	10.13	May 4, 2011	
10.3+	Form of Indemnification Agreement between Emmaus Life Sciences, Inc. and its former and current directors and officers.	8-K	000-35527	10.1	September 25, 2017	
10.4	Letter of Intent by and between Ajinomoto Aminoscience LLC and Emmaus Medical, Inc.	8-K/A	000-142031	10.24	July 5, 2011	
10.5	Office Lease dated October 20, 2014 by and between EMI	10-K	001-35527	10.23(F)	March 31, 2015	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished
		Form	File No.	Exhibit	Filing Date	
	Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) and Bixby Torrance LLC.					
10.6	First Amendment to Office Lease Agreement dated February 1, 2018 between EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) and RREF Pacific Center LLC.	10-K	000-142031	10.24a	March 21, 2019	
10.7	Second Amendment to Office Lease Agreement dated December, 2018 between EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) and RREF Pacific Center LLC.	10-K	000-142031	10.24b	March 21, 2019	
10.8	Third Amendment to Office Lease Agreement dated September 10, 2019 between EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) and RREF Pacific Center LLC.	10-K	001-35527	10.23	January 25, 2021	
10.9	Fourth Amendment to Office Lease Agreement dated November 20, 2024 between EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) and RREF Pacific Center LLC.					*
10.10	Revised Management Control Acquisition Agreement dated September 29, 2017 by and among the registrant, Telcon Holdings, Inc. and Telcon, Inc. (now known as Telcon RF Pharmaceutical Inc.)	10-Q	000-142031	10.3	November 14, 2017	
10.11	Distributor agreement entered into as of June 15, 2017 between Telcon Inc. (now known as Telcon RF Pharmaceutical Inc.) and Emmaus Life Sciences, Inc. (now known as EMI Holding, Inc.)	10-K	001-35527	10.25	January 25, 2021	
10.12	Amendment for Distributor Agreement entered into as of January 11, 2018 between Telcon Inc. (now known as Telcon RF Pharmaceutical Inc.) and Emmaus Life Sciences, Inc. (now known as EMI Holding, Inc.)	10-K	001-35527	10.26	January 25, 2021	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished
		Form	File No.	Exhibit	Filing Date	
10.13	Raw Material Supply Agreement dated July 12, 2017 between Telcon Inc. (now known as Telcon RF Pharmaceutical Inc.) and Emmaus Life Sciences, Inc. (now known as EMI Holding, Inc.)	10-K	001-35527	10.27	January 25, 2021	
10.14	API Supply Agreement made as of June 16, 2017 between Telcon Inc. (now known as Telcon RF Pharmaceutical Inc.) and Emmaus Life Sciences, Inc. (now known as EMI Holding, Inc.)	10-K	001-35527	10.28	January 25, 2021	
10.15	Additional Agreement made as of July 2, 2018 between Telcon Inc. (now known as Telcon RF Pharmaceutical Inc.) and Emmaus Life Sciences, Inc. (now known as EMI Holding, Inc.)	10-K	001-35527	10.29	January 25, 2021	
10.16	Right to Sell (Call Option) Agreement between Emmaus Life Sciences, Inc. and Telcon RF Pharmaceutical, Inc.	10-K	001-35527	10.35	January 25, 2021	
10.17	Loan Agreement Dated October 28, 2020 Between Emmaus Life Sciences, Inc. and EJ Holdings, Inc.	8-K	001-35527	10.1	November 13, 2020	
10.18	Amendment No. 1 to Loan Agreement dated January 5, 2022 between Emmaus Life Sciences, Inc. and EJ Holdings, Inc.	10-K	001-35527	10.21	March 31, 2022	
10.19	License Agreement between Kainos Medicine, Inc. and Emmaus Life Sciences, Inc.	10-K	001-35527	10.22	March 31, 2022	
10.20	Promissory Note dated December 7, 2021 issued by registrant to Soomi Niihara.	10-K	001-35527	10.26	March 31, 2022	
10.21	Amendment No.1 to Convertible Promissory Note of EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) dated as of July 8, 2019	10-K	001-35527	10.20	July 3, 2024	
10.22	Amendment No. 2 to Convertible Promissory Note of EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) dated as of January 15, 2020	10-K	001-35527	10.37	May 4, 2021	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished
		Form	File No.	Exhibit	Filing Date	
10.23	Amendment No. 3 to Convertible Promissory Note of EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) dated as of June 15, 2020.	10-K	001-35527	10.38	May 4, 2021	
10.24	Amendment No. 4 to Convertible Promissory Note of EMI Holding, Inc. (formerly, Emmaus Life Sciences, Inc.) dated as of June 15, 2023.	10-K	001-35527	10.23	July 3, 2024	
10.25	Securities Purchase Agreement dated as of February 8, 2021 among Emmaus Life Sciences, Inc. and the "Purchasers" thereunder, including form of Convertible Promissory Note attached thereto as Exhibit A	8-K	001-35527	10.1	February 16, 2021	
10.26	Transfer Restriction and Voting Agreement dated as of February 8, 2021 between Emmaus Life Sciences, Inc. and the "Purchasers" thereunder.	8-K	001-35527	10.2	February 16, 2021	
10.27	Purchase and Sale Agreement dated December 22, 2020 between Emmaus Medical, Inc. and Prestige Capital Finance, LLC.	8-K	001-35527	10.1	February 22, 2021	
10.28	Guaranty dated December 9, 2020 by Emmaus Life Sciences, Inc. in favor or Prestige Capital, Inc.	8-K	001-35527	10.2	February 22, 2021	
10.29	Form of Promissory Note issued to the persons indicated on Schedule A thereto	10-Q	001-35527	10.2	May 13, 2022	
10.30	Promissory Note dated March 31, 2022 issued to Wei Peu Zen	10-Q	001-35527	10.3	May 13, 2022	
10.31	Promissory Note dated July 27, 2022 issued to Yutaka and Soomi Niihara	10-Q	001-35527	10.1	November 14, 2022	
10.32	Promissory Note dated August 16, 2022 issued to Yutaka and Soomi Niihara	10-Q	001-35527	10.3	November 14, 2022	
10.33	Promissory Note dated August 16, 2022 issued to Yutaka and Soomi Niihara	10-Q	001-35527	10.4	November 14, 2022	
10.34	Promissory Noted dated August 17, 2022 issued to Hope International Hospice, Inc.	10-Q	001-35527	10.6	November 14, 2022	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished
		Form	File No.	Exhibit	Filing Date	
10.35	Promissory Note dated October 20, 2022 issued to Hope International Hospice, Inc.	10-K	001-35527	10.42	March 31, 2023	
10.36	Promissory Note dated February 17, 2023 issued by registrant to Shigeru Matsuda.	10-Q	001-35527	10.2	May 15, 2023	
10.37	Promissory Noted dated March 17, 2023 issued to Hope International Hospice, Inc.	10-Q	001-35527	10.5	May 15, 2023	
10.38	Promissory Note dated March 21, 2023 issued to Yutaka and Soomi Niihara	10-Q	001-35527	10.6	May 15, 2023	
10.39	Promissory Note dated April 24, 2023 issued by registrant to Eastwind, Ltd.	10-Q	001-35527	10.1	August 14, 2023	
10.40	Promissory Note dated May 26, 2023 issued by registrant to Shigeru Matsuda.	10-Q	001-35527	10.3	August 14, 2023	
10.41	Promissory Note dated December 1, 2023 issued by registrant to Wei Peu Zen	10-K	001-35527	10.41	July 3, 2024	
10.42	Promissory Note dated March 15, 2024	10-Q	001-35527	10.4	September 10, 2024	
10.43	Form of Convertible Promissory Note Due February 24, 2025	8-K	001-35527	4.1	February 26, 2024	
10.44	Exchange Agreement dated as of February 21, 2024	8-K	001-35527	10.1	February 26, 2024	
10.45	Form of Joinder Agreement and Amendment to Transfer Restriction and Voting Agreement	8-K	001-35527	10.2	February 26, 2024	
10.46	Transfer Restriction and Voting Agreement entered into as of February 8, 2021 among Emmaus Life Sciences and the parties signatory thereto	8-K	001-35527	10.2	February 16, 2021	
10.47	Agreement for the Purchase and Sale of Future Receipts with Agile Capital	10-Q	001-35527	10.1	November 19, 2024	
10.48	Agreement for the Purchase and Sale of Future Receipts with Agile Capital dated December 2, 2024					*
19.1	Policy on Insider Trading and Policy Regarding Special Trading Procedures	10-K	001-35527	19.1	March 31, 2023	
21.1	List of Subsidiaries.					*

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished
		Form	File No.	Exhibit	Filing Date	
23.1	Consent of Independent Registered Public Accounting Firm Marcum LLP					*
23.2	Consent of Independent Registered Public Accounting Firm Baker Tilly US, LLP.					*
31.1	Certification of Principal Executive Officers pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					*
31.2	Certification of Chief Financial Officer pursuant of Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					*
32.1	Certification of Principal Executive Officers and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					*
101.INS	Inline XBRL Instance Document (embedded within the Inline XBRL document)					
101.SCH	Inline XBRL Taxonomy Extension Schema Document					
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)					

+ Management contract or compensatory plan, contract or arrangement
* 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, in the City of Torrance, California.

Emmaus Life Sciences, Inc.

By:	*/s/ Willis C. Lee*
	Willis C. Lee
Title:	Chairman, Chief Executive Officer (Principal Executive Officer)
Date	April 14, 2025

By:	*/s/ Yasushi Nagasaki*
	Yasushi Nagasaki
Title:	Chief Financial Officer (Principal Financial and Accounting Officer)
Date	April 14, 2025

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

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Willis C. Lee as his attorney-in-fact, with the power of substitution, for him in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

By:	*/s/ Jon Kuwahara*
	Jon Kuwahara
Title:	Director
Date	April 14, 2025

By:	*/s/ Wei Peu Zen*
	Wei Peu Zen
Title:	Director
Date	April 14, 2025

By:	*/s/ Ian Zwicker*
	Ian Zwicker
Title:	Director
Date	April 14, 2025

INDEX TO FINANCIAL STATEMENTS

EMMAUS LIFE SCIENCES, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of
Emmaus Life Sciences, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of Emmaus Life Sciences, Inc. and its subsidiaries (the "Company") as of December 31, 2024, the related consolidated statements of operations and comprehensive loss, changes in stockholders' deficit and cash flows for the year in the period ended December 31, 2024, and the related notes (collectively referred to as the "financial statements"). In our opinion, based on our audit, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2024, and the results of its operations and its cash flows for the year in the period ended December 31, 2024, in conformity with accounting principles generally accepted in the United States of America.

The consolidated financial statements of the Company as of and for the year ended December 31, 2023, before the retrospective adjustment described in Notes 2, were audited by other auditors whose report, dated July 2, 2024, expressed an unqualified opinion on those statements. We have audited this retrospective adjustment to the 2023 consolidated financial statements, as reported in the consolidated financial statements as of and for the year ended December 31, 2024, related to the adoption of Accounting Standards Update 2023-07 "*Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*" described in Note 2. In our opinion, such adjustment is appropriate and has been properly applied. We were not engaged to audit, review, or apply any procedures related to the Company's 2023 consolidated financial statements other than with respect to the adjustment and, accordingly, we do not express an opinion or any other form of assurance on the 2023 consolidated financial statements as a whole.

Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 2, the Company has a significant working capital deficiency, has incurred significant losses and needs to raise additional funds to meet its obligations and sustain its operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audit. 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of

expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

Critical Audit Matters

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

Variable Considerations

As described in Note 2 to the consolidated financial statements, Revenue from product sales is recorded at the transaction price, net of estimates for variable consideration consisting of sales discounts, returns, government rebates, chargebacks and commercial discounts. The Company recorded sales deductions of $5 million for the year ended of December 31, 2024. Actual amounts of consideration ultimately received may differ from estimates. If actual results vary materially from estimates, the Company will adjust these estimates, which will affect net sales of the products and results from operations in the period such estimates are adjusted.
We identified the determination of variable consideration as a critical audit matter. Significant judgment is exercised by the Company in estimating variable consideration when determining the amount of revenue to recognize. Given these factors, the related audit effort in evaluating management’s judgments in determining the amount of variable consideration used to determine the transaction price was extensive and required a high degree of auditor judgment.

- Obtained an understanding of the Company's process and controls related to the determination of sales deductions
- Evaluated the Company’s accounting policies related to the determination of variable consideration in the calculation of the transaction price.
- Evaluated the reasonableness of management’s estimate of variable consideration in accordance with their accounting policies based on contractual terms and historical data and variable consideration estimates.
- Tested variable consideration amounts on a sample basis by recalculating recorded amounts based on contractual terms.
- Tested the mathematical accuracy of management’s calculations of net revenue and the associated timing of net revenue recognized in the consolidated financial statements.

Investment in Convertible Bond

As described in Note 5 to the consolidated financial statements, the Company purchased a convertible bond and classified the bond as an available for sale security that is remeasured at fair value on a recurring basis. The fair value of the convertible bond was $15 million as of December 31, 2024. The fair value was determined using a Lattice pricing model and the change in fair value was recorded as part of other comprehensive loss.

- Obtained an understanding of the Company's process of accounting for convertible bond.
- Obtained and reviewed the agreements.
- Evaluated the methods and significant assumptions used by the Company's valuation professional.
- Tested the accuracy and the completeness of the underlying data and the mathematical accuracy of the valuation report.
- Utilized auditor's valuation specialist to assist in the evaluation of the methodology used by the Company and assumptions included in determining the fair value of the convertible bond.
- Evaluated the related disclosures in the consolidated financial statements.

We identified the determination of the fair value using the binomial lattice model as a critical audit matter. Significant judgment is exercised by the Company in determining the fair value of the convertible bond. Given these factors, the related audit effort in evaluating management's judgments in determining the fair value of the convertible bond was complex and required a high degree of auditor judgment.

/s/ Marcum LLP

Marcum LLP

We have served as the Company's auditor since 2024.

Costa Mesa, California
April 14, 2025

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Emmaus Life Sciences, Inc.:

Opinion on the Financial Statements

We have audited, before the effects of the adjustments to retrospectively apply the changes in presentation of the Company's segments disclosure described in Note 2, the accompanying consolidated balance sheet of Emmaus Life Sciences, Inc. and its subsidiaries (the "Company") as of December 31, 2023, the related consolidated statements of operations and comprehensive loss, changes in stockholders' deficit, and cash flows, for the year ended December 31, 2023 , and the related notes to the consolidated financial statements (collectively referred to as the "consolidated financial statements"). In our opinion the consolidated financial statements,before the effects of the adjustments to retrospectively apply the changes in presentation of the Company's segments disclosure described in Note 2,present fairly, in all material respects, the financial position of the Company at December 31, 2023, and the results of its operations and its cash flows for year ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

We were not engaged to audit, review, or apply any procedures to the adjustments to retrospectively apply the changes in segment presentation described in Note 2, and accordingly, we do not express an opinion or any other form of assurance about whether such adjustments are appropriate and have been properly applied. The adjustments were audited by other auditors.

Emphasis of Matter

We draw your attention to Notes 5,6,7,8,11, and 12 to the consolidated financial statements which describe the various transactions between the Company and related parties. Our opinion is not modified in respect to these matters.

Going Concern Uncertainty

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has incurred recurring operating losses, working capital deficit, and accumulated deficit. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit 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 audit 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. We believe that our audit provides a reasonable basis for our opinion.

/s/ BAKER TILLY US, LLP

We served as the Company's auditor from 2020 to 2024.

Irvine, California

July 2, 2024

EMMAUS LIFE SCIENCES, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)

	As of	
	December 31, 2024	**December 31, 2023**
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 1,389	$ 2,547
Accounts receivable, net	2,623	5,524
Inventories, net	1,635	1,711
Prepaid expenses and other current assets	1,120	1,727
Total current assets	6,767	11,509
Property and equipment, net	46	59
Right of use assets	1,530	2,337
Investment in convertible bond	15,037	20,978
Other assets	222	296
Total assets	$ 23,602	$ 35,179
LIABILITIES AND STOCKHOLDERS' DEFICIT		
CURRENT LIABILITIES		
Accounts payable and accrued expenses	$ 16,926	$ 16,951
Operating lease liabilities, current portion	2,423	1,639
Conversion feature derivative, notes payable	162	451
Other current liabilities	16,557	14,681
Warrant derivative liabilities	8	65
Notes payable, current portion, net of discount	7,093	8,215
Notes payable to related parties	3,372	3,122
Convertible notes payable, net of discount	17,014	16,383
Total current liabilities	63,555	61,507
Operating lease liabilities, less current portion	815	1,839
Other long-term liabilities	13,465	17,363
Notes payable to related parties, net of discount	2,246	2,226
Total liabilities	80,081	82,935
Commitments and contingent liabilities (Note 11)		
STOCKHOLDERS' DEFICIT		
Preferred stock, par value $0.001 per share, 15,000,000 shares authorized, none issued or outstanding	—	—
Common stock, par value $0.001 per share, 250,000,000 shares authorized, 63,865,571 and 61,845,963 shares issued and outstanding at December 31, 2024 and December 31, 2023, respectively	64	62
Additional paid-in capital	225,896	225,333
Net loan receivable from EJ Holdings	(16,869)	(16,869)
Accumulated other comprehensive loss	(2,995)	(160)
Accumulated deficit	(262,575)	(256,122)
Total stockholders' deficit	(56,479)	(47,756)
Total liabilities and stockholders' deficit	$ 23,602	$ 35,179

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

EMMAUS LIFE SCIENCES, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share amounts)

	Years Ended December 31,	
	2024	**2023**
REVENUES, NET	$ 16,653	$ 29,597
COST OF GOODS SOLD	1,201	1,342
GROSS PROFIT	15,452	28,255
OPERATING EXPENSES		
Research and development	657	1,189
Selling	6,002	8,635
General and administrative	10,687	14,891
Total operating expenses	17,346	24,715
INCOME (LOSS) FROM OPERATIONS	(1,894)	3,540
OTHER INCOME (EXPENSE)		
Loss on debt extinguishment	—	(821)
Change in fair value of warrant derivative liabilities	57	1,195
Change in fair value of conversion feature derivative, notes payable	291	2,773
Realized loss on investment in convertible bond	(544)	(297)
Net loss on equity method investment	—	(1,713)
Gain on restructured debt	1,032	—
Foreign exchange loss	(148)	(1,767)
Interest and other income (net)	274	681
Interest expense	(5,492)	(7,383)
Total other expense	(4,530)	(7,332)
LOSS BEFORE INCOME TAXES	(6,424)	(3,792)
Income tax provision (benefit)	29	(59)
NET LOSS	(6,453)	(3,733)
COMPONENTS OF OTHER COMPREHENSIVE LOSS		
Unrealized gain (loss) on debt securities available for sale (net of tax)	(3,086)	3,033
Reclassification adjustment for loss included in net loss	197	403
Foreign currency translation adjustments	54	(977)
Other comprehensive income (loss)	(2,835)	2,459
COMPREHENSIVE LOSS	$ (9,288)	$ (1,274)
NET LOSS PER COMMON SHARE - BASIC AND DILUTED	$ (0.10)	$ (0.07)
WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING BASIC AND DILUTED	63,234,789	53,105,388

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

EMMAUS LIFE SCIENCES, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' DEFICIT
(In thousands, except share and per share amounts)

	Common stock		Additional paid-in	Loan receivable from EJ	Accumulated other comprehensive	Accumulated	Total stockholders'
	Shares	Amount	capital	Holdings	loss	deficit	deficit
Balance, January 1, 2023	49,583,501	$ 50	$ 220,815	$ —	$ (2,619)	$ (252,337)	(34,091)
Fair value of warrants including down-round protection adjustments	—	—	52	—	—	(52)	—
Convertible and promissory notes converted to shares	12,262,462	12	4,059	—	—	—	4,071
Share-based compensation	—	—	407	—	—	—	407
Unrealized gain on debt securities available for sale (net of tax)	—	—	—	—	3,033	—	3,033
Reclassification adjustment for loss included in net loss	—	—	—	—	403	—	403
Foreign currency translation effect	—	—	—	—	(977)	—	(977)
Net loan receivable from EJ Holdings	—	—	—	(16,869)	—	—	(16,869)
Net loss	—	—	—	—	—	(3,733)	(3,733)
Balance, December 31, 2023	61,845,963	62	225,333	(16,869)	(160)	(256,122)	(47,756)
Convertible notes converted to shares	2,019,608	2	307	—	—	—	309
Share-based compensation	—	—	256	—	—	—	256
Unrealized gain on debt securities available for sale (net of tax)	—	—	—	—	(3,086)	—	(3,086)
Reclassification adjustment for loss included in net loss	—	—	—	—	197	—	197
Foreign currency translation effect	—	—	—	—	54	—	54
Net loss	—	—	—	—	—	(6,453)	(6,453)
Balance, December 31, 2024	63,865,571	$ 64	$ 225,896	$ (16,869)	$ (2,995)	$ (262,575)	$ (56,479)

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

EMMAUS LIFE SCIENCES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,	
	2024	2023
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (6,453)	$ (3,733)
Adjustments to reconcile net loss to net cash flows used in operating activities		
Depreciation and amortization	22	32
Inventory reserve	58	12
Amortization of discount of notes payable and convertible notes payable	708	2,568
Foreign exchange adjustments	(245)	1,911
Tax benefit recognized on unrealized gain on debt securities	—	(100)
Realized loss on investment in convertible bond	544	297
Loss on equity method investment	—	1,713
Loss on debt extinguishment	—	821
Gain on restructured debt	(1,032)	—
Loss on disposal of property and equipment	—	1
Loss on leased assets	4	—
Share-based compensation	256	1,262
Fair value of warrants issued for services	—	334
Change in fair value of warrant derivative liabilities	(57)	(1,195)
Change in fair value of conversion feature derivative, notes payable	(291)	(2,773)
Changes in fair value of embedded derivative, note payable from related party	—	(36)
Net changes in operating assets and liabilities		
Accounts receivable	2,900	(5,149)
Inventories	7	650
Prepaid expenses and other current assets	605	(214)
Other non-current assets	868	239
Accounts payable and accrued expenses	1,300	4,800
Other current liabilities	(1,990)	(2,025)
Other long-term liabilities	510	(918)
Net cash flows used in operating activities	(2,286)	(1,503)
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from sale of convertible bond	2,508	2,232
Sales of property and equipment	4	—
Purchases of property and equipment	(12)	(17)
Loan to equity method investee	—	(2,647)
Net cash flows provided by (used in) investing activities	2,500	(432)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from notes payable issued	4,111	7,050
Proceeds from notes payable issued, related parties	—	927
Proceeds from convertible notes payable issued	—	1,000
Proceeds from convertible notes payable issued, related party	—	1,000
Payments of notes payable	(4,509)	(7,390)
Payments of notes payable, related party	(500)	(110)
Payments of convertible notes	(455)	—
Net cash flows provided by (used in) financing activities	(1,353)	2,477
Effect of exchange rate changes on cash	(19)	(16)
Net decrease in cash and cash equivalents	(1,158)	526
Cash and cash equivalents, beginning of year	2,547	2,021
Cash and cash equivalents, end of year	$ 1,389	$ 2,547
SUPPLEMENTAL DISCLOSURES OF CASH FLOW ACTIVITIES		
Interest paid	$ 2,246	$ 2,453
Income taxes paid (refunded)	$ 48	$ 83
NON-CASH INVESING AND FINANCING ACTIVITIES		
Capitalized interest on renewal of notes payable	$ —	$ 618
Conversion of convertible note payable to common stock	$ 260	$ 3,590
Newly acquired right-of-use lease asset	$ —	$ 189

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

NOTE 1—DESCRIPTION OF BUSINESS

References herein to the "Company" or "Emmaus" means Emmaus Life Sciences, Inc. and its direct and indirect subsidiaries.

Nature of Business—The Company is a commercial-stage biopharmaceutical company engaged in the marketing and sales of the Company's lead product Endari® (prescription grade L-glutamine oral powder), which is approved by the U.S. Food and Drug Administration, or FDA, to reduce the acute complications of sickle cell disease ("SCD") in adult and pediatric patients five years of age and older. Endari® has received Orphan Drug designation from the FDA which designation generally affords marketing exclusivity for Endari® in the U.S. for a seven-year period ended in July 2024.

Endari® is sold and distributed through nonexclusive distributors in the U.S. and exclusive distributors in other countries with support from an internal commercial sales team. Endari® is reimbursable by the Centers for Medicare and Medicaid Services, and every state provides coverage for Endari® for outpatient prescriptions to all eligible Medicaid enrollees within their state Medicaid programs. Endari® is also reimbursable by many commercial payors. The Company has agreements in place with the nation's leading distributors, as well as physician group purchasing organizations and pharmacy benefits managers, making Endari® available at selected retail and specialty pharmacies nationwide.

NOTE 2—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation—The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles ("GAAP").

Going concern— The accompanying consolidated financial statements have been prepared on the basis that the Company will continue as a going concern. The Company incurred a net loss of $6.5 million for the year ended December 31, 2024 and had a working capital deficit of $56.8 million and accumulated deficit was $262.6 million as of December 31, 2024. Management expects that the Company's current liabilities, operating losses and expected capital needs, including debt service on its existing indebtedness and the expected costs relating to the commercialization of Endari® in the Middle East North Africa ("MENA") region and elsewhere will exceed its existing cash balances and cash expected to be generated from operations for the foreseeable future. To meet the Company's current liabilities and future obligations, the Company will need to restructure or refinance its existing indebtedness and raise additional funds through related-party loans, third-party loans, equity and debt financings or licensing or other strategic agreements. Except the debt arrangement described under "Note 14 - Subsequent Events," the Company has no understanding or arrangement for any additional financing, and there can be no assurance that the Company will be able to restructure or refinance its existing indebtedness or obtain additional related-party or third-party loans or complete any additional equity or debt financings on favorable terms, or at all, or enter into licensing or other strategic arrangements. Due to the uncertainty of the Company's ability to meet its current liabilities and operating expenses, there is substantial doubt about the Company's ability to continue as a going concern for 12 months from the date that these consolidated financial statements are issued. The consolidated financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Principles of consolidation—The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, EMI Holding, Inc. and EMI Holding's wholly-owned subsidiary, Emmaus Medical Inc., and Emmaus Medical, Inc's wholly-owned subsidiaries. All significant intercompany transactions have been eliminated.

Estimates—Financial statements prepared in accordance with GAAP require management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates made by management include those relating to revenue recognition on product sales, the variables used to calculate the valuation of investment in convertible bond, conversion features, stock options and warrants, and estimated accruals on an ongoing basis. The Company bases its estimates on historical experience and on various other assumptions that management believes to be reasonable under the circumstances. Actual results could differ from those estimates under different assumptions or conditions. To the extent there are material differences between these estimates and actual results, the Company's financial statements will be affected.

Revenue recognition— The Company realizes net revenues primarily from sales of Endari® to distributors and specialty pharmacy providers. Distributors resell Endari® to other pharmacy and specialty pharmacy providers, health care providers, hospitals, and clinics. In addition to agreements with these distributors, the Company has contractual arrangements with specialty pharmacy providers, in-office dispensing providers, physician group purchasing organizations, pharmacy

benefits managers and government entities that provide for government-mandated or privately negotiated rebates, chargebacks and discounts with respect to the purchase of Endari®. These various discounts, rebates, and chargebacks are referred to as "variable consideration." Revenue from product sales is recorded net of variable consideration.

Under ASC 606 *Revenue from Contracts with Customers*, the Company recognizes revenue when its customers obtain control of the Company's product, which typically occurs on delivery. Revenue is recognized in an amount that reflects the consideration that the Company expects to receive in exchange for the product, or transaction price. To determine revenue recognition for contracts with customers within the scope of ASC 606, the Company performs the following 5 steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the Company's performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies the relevant performance obligations.

Revenue from product sales is recorded at the transaction price, net of estimates for variable consideration consisting of sales discounts, returns, government rebates, chargebacks and commercial discounts. Variable consideration is estimated using the expected-value amount method, which is the sum of probability-weighted amounts in a range of possible transaction prices. Actual variable consideration may differ from the Company's estimates. If actual results vary from the Company's estimates, the Company adjusts the variable consideration in the period such variances become known, which would affect net revenues in that period. The following are our significant categories of variable consideration:

Sales Discounts: The Company affords its customers prompt payment discounts and additional discounts to encourage bulk orders to generate needed working capital.

Product Returns: The Company offers distributors the right to return product purchased principally based upon (i) overstocks, (ii) inactive product or non-moving product due to market conditions, and (iii) expired products. Product return allowances are estimated and recorded at the time of sale.

Government Rebates: The Company is subject to discount obligations under state Medicaid programs and the Medicare Part D prescription drug coverage gap program. Management estimates Medicaid and Medicare Part D prescription drug coverage gap rebates based upon a range of possible outcomes that are probability-weighted for the estimated payor mix. These reserves are recorded in the period in which the related revenues are recognized, resulting in a reduction of product revenues and the establishment of a current liability that is included as an accounts payable and accrued expenses in the consolidated balance sheets. The liability for these rebates consists primarily of estimates of claims expected to be received in future periods related to recognized revenues.

Chargebacks and Discounts: Chargebacks for fees and discounts represent the estimated obligations resulting from contractual commitments to sell products to certain specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities at prices lower than the list prices charged to distributors. The distributors charge the Company for the difference between what they pay for the products and the Company's contracted selling price to these specialty pharmacy providers, in-office dispensing providers, group purchasing organizations, and government entities. In addition, the Company has contractual agreements with pharmacy benefit managers who charge us for rebates and administrative fee in connection with the utilization of product. These reserves are established in the same period that the related revenues are recognized, resulting in a reduction of revenues. Chargeback amounts are generally determined at the time of resale of products by the distributors.

Leases — In accordance with ASC 842 *Leases*, the Company determines whether an arrangement is a lease at inception. For leases where the Company is the lessee, right-of-use assets and operating lease liabilities are recognized based on the present value of remaining lease payments over the lease term. When the Company's leases do not provide an implicit rate, the Company uses an estimated incremental borrowing rate based on the information available at lease commencement date in determining the present value of lease payments. Operating lease expense is recognized on a straight-line basis over the lease term. Variable lease costs such as common area costs and other operating costs are expensed as incurred. For all lease agreements, lease and non-lease components are combined. No right-of-use asset and related lease liability are recorded for leases with an initial term of 12 months or less.

Cash and cash equivalents—Cash and cash equivalents include short-term securities, if any, with original maturities of less than ninety days. The Company maintains its cash and cash equivalents at insured financial institutions, the balances of which may, at times, exceed federally insured limits. Management believes that the risk of loss due to uninsured deposit is minimal.

Accounts receivable— Accounts receivables are primarily attributable to product sales to customers. Each reporting period, the Company evaluates the collectability of outstanding receivable balances and records an allowance for credit loss based on an estimate of current expected credit loss. The estimate is based on historical experience, customer creditworthiness, facts and circumstance specific to outstanding balances and payment terms. Provisions are made based upon a specific review of all significant outstanding invoices and the quality and age of those invoices. As of December 31, 2024 and December 31, 2023, the Company recorded valuation allowances of $0 and $124,000, respectively. The Company believes the credit risks associated with its customers are not significant.

Factoring accounts receivable— Emmaus Medical, Inc., or Emmaus Medical, the Company's indirect wholly owned subsidiary, entered into a purchase and sales agreement with Prestige Capital Finance, LLC or Prestige Capital, pursuant to which Emmaus Medical may offer and sell to Prestige Capital from time to time eligible accounts receivable in exchange for Prestige Capital's down payment, or advance, to Emmaus Medical of 65% to 80% of the face amount of the accounts receivable, subject to a $7.5 million cap on advances at any time. The balance of the face amount of the accounts receivables will be reserved by Prestige Capital and paid to Emmaus Medical, less discount fees of Prestige Capital ranging from 2.25% to 7.25% of the face amount, as and when Prestige Capital collects the entire face amount of the accounts receivable. Emmaus Medical's obligations to Prestige Capital under the purchase and sale agreement are secured by a security interest in the accounts receivable and all or substantially all other assets of Emmaus Medical. In connection with the purchase and sale agreement, Emmaus guarantees Emmaus Medical's obligations under the purchase and sale agreement. In October 2024, the purchase and sales agreement with Prestige Capital was terminated.

At December 31, 2023, the Company recorded approximately $1,514,000 of due from factoring of accounts receivable, and approximately $24,000 of liabilities from factoring included in other current liabilities. For years ended December 31, 2024 and 2023, the Company incurred approximately $149,000 and $615,000, respectively, of factoring fees included in general and administrative expenses.

Inventories—Inventories consist of raw materials, finished goods and work-in-process and are valued on a first-in, first-out basis at the lesser of cost or net realizable value. Work-in-process inventories consist of L-glutamine for the Company's products that has not yet been packaged and labeled for sale. Inventories are stated at the lower of cost or net realizable value. The Company periodically reviews its inventory and provides for potential obsolescence based on its assessment of market conditions and anticipated demand. Substantially all raw materials purchase during the years ended December 31, 2024 and 2023 were supplied by one supplier. Inventories are presented net of reserves totaling $5.0 million as of December 31, 2024 and 2023.

Prepaid expenses and other current assets— Prepaid expenses and other current assets consist primarily of cost paid for future services or refunds from vendors which will occur within a year. Prepaid expenses include prepayment in insurance, subscription services, consulting and other services which are being amortized over the contract terms or recognized upon services are performed.

Property and equipment, net— Equipment, furniture and fixtures are recorded at historical cost and depreciated on a straight-line basis over their estimated useful lives of five to seven years. Leasehold improvements are recorded at historical cost and amortized on a straight-line basis over the shorter of their estimated useful lives or the lease terms. Maintenance and repairs are expensed as incurred, while major additions and improvements are capitalized. Gains and losses on disposition are included in other income (expenses), if any.

Impairment of long-lived assets—The Company evaluates the carrying value of its long-lived assets for impairment whenever events or changes in circumstances indicate that such carrying values may not be recoverable. Management uses its best judgment based on the current facts and circumstances relating to the Company's business when determining whether any significant impairment factors exist.

If the Company determines that the carrying values of long-lived assets may not be recoverable based upon the existence of one or more indicators of impairment, the Company performs an undiscounted cash flow analysis to determine if impairment exists. If impairment exists, the Company measures the impairment based on the difference between the asset's carrying amount and its fair value, and the impairment is reflected in the consolidated statement of operations in the period in which the long-lived asset impairment is determined to have occurred. No impairment existed as of December 31, 2024 and 2023.

Research and development—Research and development consists of expenditures for the research and development of the Company's products and product candidates, which primarily involve contract research, payroll-related expenses and other related supplies. Research and development costs are expensed as incurred.

Share-based compensation—The Company recognizes compensation cost for share-based compensation awards during the service term of the recipients of the share-based awards. The fair value of share-based compensation is calculated using the Black-Scholes-Merton pricing model. The Black-Scholes-Merton model requires subjective assumptions regarding future stock price volatility and expected time to exercise, which greatly affect the calculated values. The expected term of awards granted is calculated using the simplified method. The risk-free rate selected to value any grant is based on the U.S. Treasury rate on the grant date that corresponds to the expected term of the award. The expected volatility was adjusted using the historical volatility of the Company's common stock and comparable publicly traded securities.

Income taxes—The Company accounts for income taxes under the asset and liability method, wherein deferred tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period the enactment occurs. A valuation allowance is provided for certain deferred tax assets if it is more likely than not that the Company will not realize tax assets through the generation of future taxable income for the related jurisdictions.

When tax returns are filed, it is highly probable that some positions taken would be sustained upon examination by the taxing authorities, while others are subject to uncertainty about the merits of the position taken or the amount of the position that would be ultimately sustained. The benefit of a tax position is recognized in the financial statements in the period during which, based on all available evidence, management believes it is more likely than not that the position will be sustained upon examination, including the resolution of appeals or litigation processes, if any. Tax positions taken are not offset or aggregated with other positions. Tax positions that meet the more-likely-than-not recognition threshold are recorded at the largest amount of tax benefit that is more than 50 percent likely of being realized upon examination by the applicable taxing authority. The portion of the benefits associated with tax positions taken that exceeds the amount measured as described above is reflected as a liability for unrecognized tax benefits along with any associated interest and penalties that would be payable to the taxing authorities upon examination.

As of December 31, 2024 and 2023, the Company had no unrecognized tax benefits and no positions which, in the opinion of management, would be reversed if challenged by a taxing authority. In the event the Company is assessed interest or penalties, such amounts will be classified as income tax expense in the financial statements.

Comprehensive loss—Comprehensive loss includes net loss and other comprehensive loss relating to foreign translation adjustments of the Company’s subsidiaries and the changes in fair value of investment in convertible bond classified as available for sale.

Investment in convertible bond – The Company has measured its investment in convertible bond at fair value. The convertible bond is classified as available for sale and the changes in fair value are reported in other comprehensive loss for each reporting period.

Foreign currency translation—The Company’s reporting currency is the U.S. dollar. The functional currencies of its foreign subsidiaries are the primary currencies within the countries in which they operate. Assets and liabilities of their operations are translated into U.S. dollars at period-end exchange rates, and revenues, if any, and expenses are translated into U.S. dollars at average exchange rates in effect during each reporting period. Adjustments resulting from the translation are reported in other comprehensive loss. Capital accounts are translated at historical foreign currency exchange rates.

Financial instruments—Financial instruments included in the financial statements are comprised of cash and cash equivalents, investment in convertible bond, accounts receivable, warrant derivative liabilities, accounts payable, certain accrued liabilities, convertible notes payable, notes payable, conversion feature liabilities and other contingent liabilities.

Fair value measurements—The Company defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in accordance with ASC 820. The Company measures fair value under a framework that provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described as follows:

Level 1: Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets.

Level 2: Inputs to the valuation methodology include:

Quoted prices for similar assets or liabilities in active markets;

Quoted prices for identical or similar assets or liabilities in inactive markets;

Inputs other than quoted prices that are observable for the asset or liability; and

Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

If the asset or liability has a specified (contractual) term, the Level 2 inputs must be observable for substantially the full term of the asset or liability.

Level 3: Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The fair value measurement level of an asset or liability within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. The carrying values of cash and cash equivalents, accounts receivables, other current assets, account payable and accrued expenses, and other current liabilities approximate fair value due to the short-term maturity of those instruments.

The investment in convertible bond, the convertible features on convertible debt instruments and certain outstanding warrants that contain price adjustment provision are remeasured at fair value on a recurring basis using Level 3 inputs. The level 3 inputs in the valuation and valuation methods used are discussed in Note 5, 7 and 8. There are no other assets or liabilities measured at fair value on a recurring basis.

Derivative liability—The Company evaluates its financial instruments including convertible notes to determine if such instruments are derivatives or contain features that qualify as embedded derivatives in accordance with ASC 815. The Company applies significant judgment to identify and evaluate terms and conditions in these contracts and agreements to determine whether embedded derivative exists. If all the requirements for bifurcation are met, embedded derivatives are separately measured from the host contract. Bifurcated embedded derivatives are initially recorded at fair value and then remeasure at each reporting period, with change in fair value recognized in the consolidated statements of operations. Bifurcated embedded derivative are classified as separate liability in the consolidated balance sheets.

The Company's derivative liability related to the conversion feature embedded in the convertible promissory notes. See note 7 for further details.

Net loss per share— The basic net loss per common share is computed by dividing net loss available to common stockholders by the weighted-average number of common shares outstanding. Dilutive net loss per share is computed in a similar manner, except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potential common shares had been issued and if the additional common shares were dilutive. The following securities were not included diluted shares outstanding because the effect would be anti-dilutive.

	Years Ended December 31,	
	2024	**2023**
Stock options	5,287,284	3,223,881
Warrants	4,625,000	4,732,391
Convertible notes	176,222,145	116,568,908
Total anti-dilutive instrument	186,134,429	124,525,180

Segment reporting—The Company operates and manages its business as a single reportable segment for primarily the marketing and sales of Endari®. In accordance with ASC 280, *"Segment Reporting,"* the determination of a single business segment is consistent with the consolidated financial information regularly provided to the Company's chief operating decision maker ("CODM").

The Company's CODM is its Chief Executive Officer, who reviews and evaluates consolidated income or loss from operations for purposes of evaluating performance, making operating decisions, allocating resources, and planning and forecasting for future periods. The significant components of consolidated income or loss from operations regularly provided to the CODM include revenues, net and the significant expense categories presented in the accompanying consolidated statements of operations and comprehensive loss (i.e., cost of goods sold, research and development, selling, and general and

administrative expenses). These are presented at the consolidated level and used by the CODM to monitor budgeted versus actual results to make key operating decisions. The information and operating expense categories presented in the accompanying consolidated statements of operations and comprehensive loss are fully reflective of the significant expense categories and amounts that are regularly provided to the CODM.

The measure of segment assets that is regularly reported to the CODM includes cash and cash equivalent and accounts receivable, net, each as reported on the consolidated balance sheets.

New and recently adopted accounting pronouncements— Effective January 1, 2024, the Company adopted Accounting Standards Update 2023-07, *Segment Reporting (Topic 280)*: "Improvements to Reportable Segment Disclosures" ("ASU *2023-07"*), to update reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses and information used to assess segment performance. This update is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. The Company adopted ASU 2023-07 on a retrospective basis for the 2024 annual period, and for interim periods beginning in 2025. The impact is limited to the Company's financial statement disclosures, which are presented in the Segment reporting section above.

In December 2023, the FASB issued *ASU 2023-09, Improvements to Income Tax Disclosures*, which requires entities to disclose disaggregated information about their effective tax rate reconciliation and income taxes paid. The disclosure requirements will be applied on a prospective basis, with the option to apply them retrospectively. The standard is effective for fiscal years beginning after December 15, 2024, with early adoption permitted. The Company is currently evaluating the disclosure requirements related to this new standard.

NOTE 3—REVENUES, NET

Revenues, net by category were as follows (in thousands):

	Years ended December 31,			
	2024		2023	
Endari® - US	$ 13,478	81%	$ 21,998	74%
Endari® - International	2,669	16%	6,963	24%
Other	506	3%	636	2%
Revenues, net	16,653	100%	29,597	100%

The following table summarizes the revenue allowance and accrual activities for the years ended December 31, 2024 and 2023 (in thousands). Approximately $856,000 of trade discounts, allowances and charge-backs and returns are included in accounts receivable, net and approximately $7,229,000 of trade discounts, allowances and charge-backs, government rebates and other incentives, and returns are included in accounts payable and accrued expenses in the consolidated balance sheets:

	Trade Discounts, Allowances and Chargebacks	Government Rebates and Other Incentives	Returns	Total
Balance as of December 31, 2022	$ 1,358	$ 3,718	$ 415	5,491
Provision related to sales in the current year	2,402	4,790	1,027	8,219
Adjustments related to prior period sales	(176)	135	73	32
Credit and payments made	(2,372)	(2,985)	(652)	(6,009)
Balance as of December 31, 2023	1,212	5,658	863	7,733
Provision related to sales in the current year	1,228	3,566	153	4,947
Adjustments related to prior period sales	(72)	23	47	(2)
Credit and payments made	(1,233)	(2,435)	(925)	(4,593)
Balance as of December 31, 2024	$ 1,135	$ 6,812	$ 138	$ 8,085

The following table summarizes revenue attributable to each of the customers that accounted for 10% or more of net revenues in either of the period shown:

	Years Ended December 31,	
	2024	2023
Customer A	22%	21%
Customer B	23%	22%
Customer C	8%	11%
Customer D	18%	14%
Customer E	0%	10%
Total	71%	78%

The Company is a party to a 2017 distributor agreement and 2018 amended distributor agreement with Telcon RF Pharmaceutical, Inc., or Telcon, pursuant to which it granted Telcon exclusive rights to the Company's prescription grade L-glutamine ("PGLG") oral powder for the treatment of diverticulosis in South Korea, Japan and China in exchange for Telcon's payment of a $10 million upfront fee and agreement to purchase from the Company specified minimum quantities of the finished product. In a related license agreement with Telcon, the Company agreed to use commercially reasonable best efforts to obtain product registration in these territories within three years of obtaining FDA marketing authorization for PGLG in this indication. Telcon has the right to terminate the distributor agreement in certain circumstances for failure to obtain such product registrations, in which event the Company would be obliged to repay Telcon the $10 million upfront fee. The upfront fee of $10 million is included as unearned revenue in other current liabilities as of December 31, 2024 and 2023. Refer to Notes 11 and 12 for additional details of the Company's agreements with Telcon.

NOTE 4—SELECTED FINANCIAL STATEMENT ASSETS

Inventories consisted of the following (in thousand):

	As of December 31	
	2024	2023
Raw materials and components	$ 1,147	$ 1,329
Work-in-process	184	186
Finished goods	5,328	5,163
Inventory reserve	(5,024)	(4,967)
Total inventories, net	$ 1,635	$ 1,711

Prepaid expenses and other current assets consisted of the following (in thousands):

	As of December 31	
	2024	2023
Prepaid insurance	$ 622	$ 595
Prepaid expenses	272	536
Other current assets	226	596
Total prepaid expenses and other current assets	$ 1,120	$ 1,727

Property and equipment consisted of the following (in thousands):

	As of December 31	
	2024	2023
Equipment	$ 357	$ 383
Leasehold improvements	15	39
Furniture and fixtures	30	99
Total property and equipment	402	521
Less: accumulated depreciation	(356)	(462)
Total property and equipment, net	$ 46	$ 59

For the years ended December 31, 2024 and 2023, depreciation expenses were approximately $22,000 and $32,000, respectively reported in general and administrative expenses in the consolidated statements of operations.

NOTE 5 — INVESTMENTS

Investment in convertible bond - On September 28, 2020, the Company entered into a convertible bond purchase agreement pursuant to which it purchased at face value a convertible bond of Telcon in the principal amount of approximately $26.1 million which matures on October 16, 2030 and bears interest at the rate of 2.1% per year, payable quarterly. Beginning October 16, 2021, the Company became entitled on a quarterly basis to call for early redemption of all or any portion of the principal amount of the convertible bond. The convertible bond is convertible at the holder's option at any time and from time to time into common shares of Telcon at an initial conversion price of KRW9,232, or approximately US$8.00 per share. The initial conversion price is subject to downward adjustment on a monthly based on the volume-weighted average market price of Telcon shares as reported on Korean Securities Dealers Automated Quotations ("KOSDAQ") Market and in the event of the issuance of Telcon shares or share equivalents at a price below the market price of Telcon shares and to customary antidilution adjustments upon a merger or similar reorganization of Telcon or a stock split, reverse stock split, stock dividend or similar event. On December 30, 2024, Telcon undertook a reverse stock split at a rate of 1-for-10. The conversion price as of December 31, 2024 is set forth in the "Investment in convertible bond" table below. The convertible bond and any proceeds therefrom, including proceeds from any exercise of the early redemption right described above or the call option described below, are pledged as collateral to secure the Company's obligations under the revised API Supply Agreement with Telcon described in Note 6, 11 and 12.

Concurrent with the purchase of the convertible bond, the Company entered into an agreement dated September 28, 2020 with Telcon pursuant to which Telcon or its designee is entitled to repurchase, at par, up to 50% of the principal amount of the convertible bond at any time and from time to time commencing October 16, 2021 and prior to maturity.

The investment in convertible bond is classified as an available for sale security since management does not have intention to trade nor held until maturity, and measured at fair value on a recurring basis using Level 3 inputs, with any changes in the fair value recorded in other comprehensive loss. The fair value and any changes in fair value in the convertible bond is determined using a binominal lattice model. The model produces an estimated fair value based on changes in the price of the underlying common stock over successive periods of time.

In April 2023, Telcon offset KRW2.9 billion, or approximately US$2.2 million, against the principal amount of the Telcon convertible bond and the Company released of KRW307 million, or approximately $236,000, in cash proceeds to Telcon in satisfaction the target shortfall for the year ended 2022. The offset is reflected as a sale of the convertible bond in the "Investment in convertible bond" table below. As a result, the Company realized a net gain on investment in convertible bond of $106,000, which previously was classified as unrealized loss on debt securities available-for-sale in the other comprehensive loss.

In April 2024, Telcon offset KRW3.5 billion, or approximately $2.5 million, against the principal amount of the Telcon convertible bond and the Company released KRW893 million, or approximately $640,000, in cash proceeds to Telcon in satisfaction of the target shortfall for the year ended 2023. As a result, the Company realized a net loss on investment in convertible bond of $347,000, which previously was classified as unrealized gain on debt securities available-for-sale in the other comprehensive loss.

The following table sets forth the fair value and changes in fair value of the investment in the Telcon convertible bond as of December 31, 2024 and 2023 (in thousands):

Investment in convertible bonds	December 31, 2024	December 31, 2023
Balance, beginning of year	$ 20,978	$ 19,971
Sales of convertible bond	(2,508)	(2,232)
Net gain (loss) on investment in convertible bond	(347)	106
Change in fair value included in the statement of other comprehensive loss	(3,086)	3,133
Balance, end of year	$ 15,037	$ 20,978

The fair values as of December 31, 2024 and December 31, 2023 were based upon following assumptions:

	December 31, 2024	December 31, 2023
Principal outstanding (South Korean won)	KRW 20.1 billion	KRW 23.6 billion
Stock price	KRW 5870	KRW 873
Expected life (in years)	5.79	6.79
Selected yield	9.50%	12.25%
Expected volatility (Telcon common stock)	62.90%	71.90%
Risk-free interest rate (South Korea government bond)	2.78%	3.16%
Expected dividend yield	0.00%	0.00%
Conversion price	KRW5,850(US$3.96)	KRW705(US$0.54)

Equity method investment – During 2018, the Company and Japan Industrial Partners, Inc., or JIP, formed EJ Holdings Inc., or EJ Holdings, to acquire, own and operate an amino acids manufacturing facility in Ube, Japan. In connection with the formation, the Company invested approximately $32,000 in exchange for 40% of EJ Holdings' capital shares. JIP owned 60% of EJ Holdings' capital shares. In October 2018, the Company entered into a loan agreement with EJ Holdings under which the Company made an unsecured loan to EJ Holdings in the amount of $13.6 million. The loan proceeds were used by EJ Holdings to purchase the Ube facility in December 2019 and pay related taxes. The principal (JPY 3,637,335,720) will become due and payable in two equal installments on December 28, 2027 and on September 30, 2028 and bears interest at the rate of 1% payable annually. The parties also contemplated that the Ube facility would eventually supply the Company with the facility's output of amino acids, that the operation of the facility would be principally for the Company's benefit and, as such, that major decisions affecting EJ Holdings and the Ube facility would be made by EJ Holdings' board of directors, a majority of which were representatives of JIP, in consultation with the Company. During the years ended December 31, 2023, the Company made additional loans to EJ Holdings of $2.6 million. The Company suspended further loans to EJ Holdings in September 2023.

EJ Holdings is engaged in seeking to refurbish and phase in the Ube facility with objective of eventually obtaining regulatory clearance for the manufacture of PGLG in accordance with cGMP. EJ Holdings has had no substantial revenues since its inception, has depended on loans from the Company to acquire the Ube facility and fund its operations and will be dependent on loans from other financing unless and until its plant is activated and it can secure customers for its products. There is no assurance that needed funding will be available from other sources. If EJ Holdings fails to obtain needed funding, it may need to suspend activities at the Ube plant.

On December 28, 2023, the Company sold and assigned its EJ Holdings shares at its original cost of JPY3.6 million or US$25,304 to Niihara International, Inc., which was formed by Yutaka Niihara, M.D., Ph. D., former chairman and Chief Executive Officer of the Company and a principal stockholder of the Company. In connection with the sale and assignment, the Company derecognized its investment in EJ Holdings, including $1.5 million of currency translation adjustments recorded in other comprehensive loss. The net loan receivable from EJ Holdings was $16.9 million as reflected in net loan receivable from EJ Holdings as contra-equity on the consolidated balance sheets.

NOTE 6—SELECTED FINANCIAL STATEMENT LIABILITIES

Accounts payable and accrued expenses as of December 31, 2024 and 2023 consisted of the following (in thousands):

	As of December 31,	
	2024	2023
Accounts payable:		
Clinical and regulatory expenses	$ 452	$ 696
Professional fees	904	721
Selling expenses	1,553	1,498
Manufacturing costs	706	914
Non-employee director compensation	966	766
Other vendors	594	518
Total accounts payable	5,175	5,113
Accrued interest payable, related parties	1,145	542
Accrued interest payable	2,874	3,122
Accrued expenses:		
Payroll expenses	323	1,270
Government rebates and other rebates	7,229	5,881
Due to customers	15	844
Other accrued expenses	165	179
Total accrued expenses	7,732	8,174
Total accounts payable and accrued expenses	$ 16,926	16,951

Other current liabilities consisted of the following (in thousands):

	As of December 31	
	2024	2023
Trade discount	$ 5,000	$ 3,000
Unearned revenue (a)	10,000	10,000
Other current liabilities	1,557	1,681
Total other current liabilities	$ 16,557	$ 14,681

(a) Refer Note 3 for information regarding to the unearned revenue.

Other long-term liabilities consisted of the following (in thousands):

	As of December 31	
	2024	2023
Trade discount	$ 13,421	$ 17,324
Other long-term liabilities	44	39
Total other long-term liabilities	$ 13,465	$ 17,363

On June 12, 2017, the Company entered into an API Supply Agreement with Telcon pursuant to which Telcon advanced to the Company approximately $31.8 million as an advance trade discount in consideration of the Company's agreement to purchase from Telcon the Company's estimated annual target for bulk containers of PGLG. On July 12, 2017, the Company entered into a raw material supply agreement with Telcon which revised certain items of the API Supply Agreement (the "revised API agreement"). As of December 31, 2024 and 2023, the total trade discounts were $18.4 million and $20.3 million, respectively. The Company purchased $0.4 million and $0.8 million of PGLG from Telcon during years ended December 31, 2024, and 2023, respectively, of which $588,000 and $754,000 were reflected in accounts payable and accrued expenses as of December 31, 2024 and 2023, respectively. The revised API agreement provided for an annual API purchase target of $5 million and a target "profit" (*i.e.,* gross margin) to Telcon of $2.5 million. To the extent these targets are not met, which management refers to as a "target shortfall," Telcon may be entitled to payment of the target shortfall or to settle the target shortfall by exchange of principal and interest on the Telcon convertible bond and proceeds thereof that are pledged as a collateral to secure the Company's obligations under the API Supply Agreement and the revised API Agreement. See Note 5 for information regarding the settlement in the years ended December 31, 2024 and 2023 of the target shortfall.

NOTE 7—NOTES PAYABLE

Notes payable consisted of the following at December 31, 2024 and 2023 (in thousands except for conversion price and underlying shares) excluding the revolving line of credit agreement with related party discussed below:

Year Issued	Interest Rate Range	Term of Notes	Conversion Price		Principal Outstanding December 31, 2024	Unamortized Discount December 31, 2024	Capitalized Accrued Interest December 31, 2024	Carrying Amount December 31, 2024	Shares Underlying Notes December 31, 2024
Notes payable									
2013	10%	Due on demand	—		$ 638	$ —	$ —	$ 638	—
2022	10% - 12%	Due on demand	—		505	—	—	505	—
2023	10% - 13%	Due on demand	—		3,200	—	—	3,200	—
2024	30%-48%	Due on demand -34 weeks	—		2,854	104	—	2,750	—
					$ 7,197	**$ 104**	**$ —**	**$ 7,093**	**—**
		Current			$ 7,197	$ 104	$ —	$ 7,093	—
Notes payable - related parties									
2020	12%	Due on demand	—		100	—	—	100	—
2021	12%	Due on demand	—		700	—	—	700	—
2022	10%-12%	Due on demand - 5 years	—		4,316	75	—	4,241	—
2023	10%-60%	Due on demand	—		577	—	—	577	—
					$ 5,693	**$ 75**	**$ —**	**$ 5,618**	**—**
		Current			$ 3,372	$ —	$ —	$ 3,372	—
		Non-current			$ 2,321	$ 75	$ —	$ 2,246	—
Convertible notes payable									
2021	2%	Due on Demand	$ 0.13		895	—	—	895	39,455,164
2023	13%	Due on Demand	$ 10.00	(a)	3,150	—	—	3,150	378,388
2023	10%	Due on Demand	$ 0.29		1,000	—	—	1,000	3,905,526
2024	10%	1 year	$ 0.13		11,030	—	939	11,969	132,861,455
					$ 16,075	**$ —**	**$ 939**	**$ 17,014**	**176,600,533**
		Current			$ 16,075	$ —	$ 939	$ 17,014	176,600,533
		Grand Total			**$ 28,965**	**$ 179**	**$ 939**	**$ 29,725**	**176,600,533**

Year Issued	Interest Rate Range	Term of Notes	Conversion Price		Principal Outstanding December 31, 2023	Unamortized Discount December 31, 2023	Carrying Amount December 31, 2023	Shares Underlying Notes December 31, 2023
Notes payable								
2013	10%	Due on demand	—		$ 709	$ —	$ 709	—
2022	10% - 12%	Due on demand	—		1,284	—	1,284	—
2023	10% - 57%	Due on demand - 56 months	—		6,337	115	$ 6,222	—
					$ 8,330	**$ 115**	**$ 8,215**	**—**
		Current			$ 8,330	$ 115	$ 8,215	—
Notes payable - related parties								
2020	12%	Due on demand	—		100	—	100	—
2021	12%	Due on demand	—		700	—	700	—
2022	6%-12%	Due on demand - 5 years	—		3,716	95	3,621	—
2023	10%-60%	Due on demand - 2 months	—		927	—	927	—
					$ 5,443	**$ 95**	**$ 5,348**	**—**
		Current			$ 3,122	$ —	$ 3,122	—
		Non-current			$ 2,321	$ 95	$ 2,226	—
Convertible notes payable								
2021	2%	3 years	$ 0.13		12,640	407	12,233	113,009,154
2023	13%	Due on demand	$ 10.00	(a)	3,150	—	3,150	337,326
2023	10%	1 year	$ 0.29		1,000	—	1,000	3,559,754
					$ 16,790	**$ 407**	**$ 16,383**	**116,906,234**
		Current			$ 16,790	$ 407	$ 16,383	116,906,234
		Grand Total			**$ 30,563**	**$ 617**	**$ 29,946**	**116,906,234**

(a) This note is convertible into shares of EMI Holding, Inc., a wholly owned subsidiary of Emmaus Life Sciences, Inc.

The weighted-average stated interest rate of notes payable was 13% and 12%, respectively, for the years ended December 31, 2024 and 2023. The weighted-average effective interest rate of notes payable for the years ended December 31, 2024 and 2023 was 16% and 23%, respectively, after giving effect to discounts relating to warrants, conversion features and deferred financing cost in connection with these notes.

As of December 31, 2024, future contractual principal payments due on notes payable were as follows (in thousands):

Year Ending	
2025	$ 26,644
2026	—
2027	2,321
Total	$ 28,965

On February 9, 2021, the Company entered into a securities purchase agreement in which the Company sold and issued to purchasers in a private placement pursuant to Rule 4(a)(2) of the Securities Act of 1933, as amended, and Regulation D thereunder approximately $14.5 million principal amount of convertible promissory notes of the Company at face value.

Commencing one year from the original issue date, the convertible promissory notes became convertible at the option of the holder into shares of the Company's common stock at an initial conversion price of $1.48 per share, which equaled the "Average volume-weighted average price" ("Average VWAP") of the Company's common stock on the effective date. The initial conversion price is subject to adjustment as of the end of each three-month period following the original issue date, commencing May 31, 2021, to equal the Average VWAP as of the end of such three-month period if such Average VWAP is less than the then-conversion price. There is no floor on the conversion price. The conversion price will be subject to further adjustment in the event of a stock split, reverse stock split or certain other events specified in the convertible promissory notes. In January 2023, $500,000 principal amount of the convertible promissory notes was converted into 1,351,351 shares of the Company's common stock. In April 2023, $1 million principal amount of the convertible promissory note was converted into 2,702,702 shares of common stock. In April 2024, $260,000 principal amount plus accrued interest was converted into 2,019,608 shares of the Company's stock. For the year ended December 31, 2024, the

Company repaid $455,000 principal amount of the convertible promissory notes. As of December 31, 2024, the conversion price of the convertible promissory notes was $0.03 per share.

The convertible promissory notes bear interest at the rate of 2% per year (10% in case of default), payable semi-annually on the last business day of August and January of each year and will mature on the 3rd anniversary of the original issue date, unless earlier converted or prepaid. The convertible promissory notes are prepayable in whole or in part at the election of the holders. The convertible promissory notes are general, unsecured obligations of the Company.

In February and March 2024, Company entered into Exchange Agreements (the "Exchange Notes") with certain convertible notes holders pursuant to which it agreed to issue total of $11.1 million principal amount of convertible promissory notes of the Company due one year from issuance of the Exchange Notes in exchange for the surrender for cancellation and satisfaction in full of a like principal amount of our outstanding convertible promissory notes due in 2024. The surrendered notes bore interest at the annual rate of 2%, payable semi-annually, and were convertible at the election of the holder into shares of the Company's common stock at the conversion rate of $0.13 per share. The Exchange Notes bear interest at the annual rate of 10% and are convertible into shares of the Company’s common stock at an initial conversion rate of $0.13 per share, subject to decrease, but not increase, at the end of each three-month period from issuance to equal the VWAP (as defined) of the Company’s common stock and to adjustment in the event of a stock split, reverse stock split and similar events. The principal amount of and accrued interest on the Exchange Notes will be payable in two equal semi-annual installments. No additional consideration was paid in connection with the exchange. The convertible promissory notes are general, unsecured obligations of the Company. Management evaluated if the transaction qualified as troubled debt restructuring under ASC 470-60. Since the Company was experiencing financial difficulty and the effective borrowing rate on the restructured debt is less than the effective borrowing rate on the original debt, this transaction was accounted for as a troubled debt restructuring. As a result, the Company recorded gain on restructured debt of $1.0 million in the consolidated statement of operations for the year ended December 31, 2024. As of March 2025, $11.0 million principal amount of the Exchange Notes was due and payable on demand.

The conversion feature of the original convertible promissory notes and the Exchange Notes is separately accounted for at fair value as a derivative liability under guidance in ASC 815 that is remeasured at fair value on a recurring basis using Level 3 inputs, with any changes in the fair value of the conversion feature liability recorded in the statements of operations. The following table sets forth the fair value of the conversion feature liability as of December 31, 2024 and December 31, 2023 (in thousands):

Conversion feature liability	**December 31, 2024**	**December 31, 2023**
Balance, beginning of year	$ 451	$ 3,248
Change in fair value included in the statement of operations	(289)	(2,797)
Balance, end of year	$ 162	$ 451

The fair value and any change in fair value of conversion feature liability are determined using a binomial lattice model. The model produces an estimated fair value based on changes in the price of the underlying common stock.

The fair value as of December 31, 2024 and December 31, 2023 was based upon following assumptions:

Convertible promissory notes	**December 31, 2024**	**December 31, 2023**
Stock price	$ 0.01	$ 0.10
Conversion price	$ 0.03	$ 0.13
Select yield	22.70%	27.23%
Expected volatility	50%	50%
Time until maturity (in years)	0.14	0.16
Dividend yield	—	—
Risk-free rate	4.42%	5.51%

In September 2022, Seah Lim, M.D., Ph.D. loaned the Company $1.2 million, the proceeds of which were used to augment the Company’s working capital. The principal amount of the loan and interest thereon at the rate of 6% per annum, together with 240,000 shares of the Company’s common stock, is due and payable in lump sum on maturity in September 2025. In October 2022, Dr. Lim was appointed as a director of the Company. In accordance with ASC 815, the Company accounted for the right to receive shares as a bifurcated embedded derivative and the embedded derivative is measured at fair value at the inception and subsequently measured at fair value with changes in fair value recognized in the statements of operations. During the year ended December 31, 2023, the Company recorded a $36,000 change in fair value included in the

consolidated statements of operations. In December 2023, the principal and accrued interest were exchanged for 4,447,426 shares of common stock of the Company valued for this purpose at $0.29 a share.

In December 2022, the Company entered into an Agreement for the Purchase and Sales of Future Receipts with a third party pursuant to which it sells $3,105,000 of future receipts (the "Purchased Amount") in exchange for net proceeds of $2,300,000. Under the agreement, the Company agrees to pay $103,500 on a semi-monthly basis until the Purchased Amount is delivered. A portion of proceeds were used to prepay indebtedness of the Company. In September 2023, the Company repaid in full the outstanding balance of the loan and recognized debt extinguishment loss of $312,000 as the Company entered into another agreement discussed below.

In January 2023, Wei Peu Zen, a Director of the Company loaned the Company the principal amount of $1 million in exchange for a convertible promissory note of the Company. The convertible promissory note is due on demand after one year from the date of issuance with maturity date on January 18, 2025, bears interest at the annual rate of 10% payable quarterly and is convertible at the option of the holder into shares of the Company's common stock at a conversion rate of $0.50 a share, or 2,000,000 shares, subject to adjustment in the event of a stock split, reverse stock split and similar event. The conversion feature was bifurcated and approximately $24,000 of the change in fair value of conversion features were included in the consolidated financial statement as of December 31, 2023. In December 2023, the note was exchanged for 3,760,983 shares of common stock of the Company, valued for this purpose at $0.29 a share. In connection with the exchange, the Company recognized induced conversion expense of approximately $174,000 reflected as debt extinguishment loss in the consolidated statement of operations.

In March 2023, Dr. Niihara and his wife and Hope International Hospice, Inc. loaned the Company $127,000 and $100,000, respectively. Both loans are due on demand and bear interest at the rate of 10% per annum.

In March 2023, Emmaus Medical entered into Revenue Purchase Agreement with a third party pursuant to which it sold and assigned $700,212 of future receipts (the "Future Receipts") in exchange for net cash proceeds of $491,933. Under the agreement, the Company agreed to pay the third party 4% of weekly sales receipts until the Future Receipts have been collected.

In July 2023, Emmaus Medical reentered into a new Revenue Purchase Agreement pursuant to which it sold and assigned $828,000 of future receipt in exchange for repayment of $204,000 indebtedness from the previous agreement and net cash proceeds of approximately $300,000. Under the new agreement, the Company agreed to pay the third party approximately $26,000 weekly until the Future Receipts have been collected. The Company recognized debt extinguishment loss of $81,000. In February 2024, the Company repaid all balance in accordance with the new agreement.

In March 2023, Emmaus Medical entered into Revenue Based Financing Agreement with a third party pursuant to which it sold and assigned $700,212 of future receipt in exchange for net proceeds of $492,132. Under the agreement, the Company agreed to pay the third party approximately $22,000 weekly until the Future Receipts have been collected. In July 2023, Emmaus Medical reentered into a new Revenue Based Financing Agreement pursuant to which it sold and assigned $828,000 of future receipts in payment of $222,000 of indebtedness under the previous agreement and receipt of net cash proceeds of approximately $276,000. Under the new agreement, the Company agreed to pay the third party approximately $26,000 weekly until the Future Receipts have been collected. The Company recognized debt extinguishment loss of $87,000.

In May 2023, Emmaus Medical entered into Sale of Future Receipts Agreement with third party pursuant to which it sold and assigned $528,200 of future receipts (the "Purchased Amount") in exchange for net cash proceeds of $368,600. Under the agreement, the Company agreed to pay the third party approximately $19,000 weekly until the Purchased Amount has been collected. In September 2023, the Company repaid in full the outstanding balance of the loan and recognized debt extinguishment loss of $43,000 as the Company entered into another agreement discussed below.

In June 2023, Emmaus Medical entered into Standard Merchant Cash Advance Agreement with a third party pursuant to which it sold and assigned $877,560 of future receipts (the "Purchased Amount") in exchange for net cash proceeds of $600,000. Under the agreement, the Company agreed to pay the third party approximately $34,000 weekly until the Purchased Amount has been collected. In September 2023, the Company repaid in full the outstanding balance of the loan and recognized debt extinguishment loss of $124,000 as the Company entered into another agreement discussed below.

In September 2023, the Company entered into a Business Loan and Security Agreement with a third-party lender pursuant to which the lender loaned the Company $2.2 million, of which the Company received net proceeds of approximately $2.1 million after deduction of the lender’s origination fee but without deduction for other transaction

expenses. Under the agreement, the Company agree to pay the third party approximately $53,000 weekly for 56 weeks, or total amount of $2,970,000. The portion of proceeds were used to prepay indebtedness of the Company under the Agreement for the Purchase and Sales of Future Receipts, the Sales of Future Receipt Agreement, Standard Merchant Cash Advance Agreement referred to above.

In September 2023, Smart Start Investments Limited, of which Wei Pei Zen is a director and 9.96% shareholder, loaned the Company the principal amount of $1 million in exchange for a convertible promissory note of the Company. The convertible promissory note is due on September 5, 2024, bears interest at the annual rate of 10%, payable at maturity, and is convertible at the option of the holder into shares of common stock at a conversion rate of $0.29 a share, subject to adjustment in the event of a stock split, reverse stock split or similar event.

On March 5, 2024, the conversion feature of the convertible promissory note no longer met the scope exception in ASC 815-10-15-74 as the investors' Rule 144(d) holding period for the Company has ended and separately accounted for at fair value as a derivative liability that is remeasured at fair value on a recurring basis using Level 3 inputs, with any changes in fair value of the conversion feature liability recorded in the condensed consolidated statements of operations. As of March 5, 2024, the fair value of the conversion feature was $2,000. In September 2024, the convertible promissory note became due. As of December 31, 2024, the conversion rate exceeds stock price and therefore, the fair value of conversion feature is determined to be zero.

In October 2023, Emmaus Medical entered into Purchase and Sales of Future Receivables Agreement with a third party pursuant to which it sold and assigned $1,377,500 of future receipt (the "Purchased Amount") in exchange for net cash proceeds of $875,000. Under the agreement, the Company agreed to pay the third party approximately $81,000 weekly until the Purchase Amount has collected. In February 2024, the Company repaid all balance in accordance with the agreement.

In November 2023, Emmaus Medical entered into Agreement for the Purchase and Sale of Future Receipts with a third party pursuant to which it sold and assigned $762,200 of future receipts (the "Purchase Amount") in exchange for net cash proceeds of $468,650. Under the agreement, the Company agreed to pay the third party approximately $49,000 weekly until the Purchase Amount has been collected. In March 2024, the Company repaid all balance in accordance with the agreement.

In December 2023, Wei Peu Zen, a Director of the Company loaned the Company the principal amount of $700,000. The loan is due in two months and bears interest at the rate of 5% per month. In February 2024, the Company repaid $350,000 in principal plus accrued interest on the loan.

Beginning in February 2024, two related holders of demand promissory notes of the Company in the aggregate principal amount of approximately $2.8 million demanded repayment of the notes plus accrued interest. The Company has acknowledged its indebtedness to the holders and intends to seek to enter into a plan to repay the notes in installments. To date, the parties have not reached an agreement with respect to repayment of the notes.

In March 2024, Smart Start Investments Limited, of which Wei Peu Zen, a director of the Company is a director and 9.96% shareholder, loaned the Company the principal amount of $1,400,000. The loan was due in two months and bears interest at the rate of 2.5% per month. As of May 2024, the loan became due on demand and default rate of 5.0% per month became applicable.

In May 2024, Emmaus Medical entered into Sale of Future Receipts Agreement with third party pursuant to which it sold and assigned $1,628,000 of future receipts (the "Purchased Amount") in exchange for net cash proceeds of $1,001,000. Under the agreement, the Company agreed to pay the third party approximately $58,143 weekly until the Purchased Amount has been collected. In November 2024, the Company repaid all balance in accordance with the agreement.

In September 2024, Emmaus Medical entered into Sale of Future Receipts Agreement with third party pursuant to which it sold and assigned $1,298,000 of future receipts (the "Purchased Amount") in exchange for net cash proceeds of $800,000. Under the agreement, the Company agreed to pay the third party $35,000 weekly for 10 weeks and $41,217 weekly thereafter until the Purchase Amount has been collected.

In October 2024, the Company entered into a Note Amendment Agreement (the “Amendment”) with a third party note holder under which the annual interest rates under promissory notes issued in April 2022 and in April 2023 were reduced to 1% from 10% and 11%, respectively. No issuance costs were incurred in relation to the Amendment, and the remaining terms of the Notes remain in full force and effect. Management evaluated whether the transaction qualified as troubled debt restructuring under ASC 470-60. Since the Company was experiencing financial difficulty and the effective

borrowing rate on the restructured debt is less than the effective borrowing rate on the original debt, the transaction was accounted for as a troubled debt restructuring. As the modified undiscounted future cash payments equal to or exceed the carrying amount at restructuring for each of the Notes, no gain was recognized on the restructuring.

In December 2024, Emmaus Medical entered into Sale of Future Receipts Agreement with third party pursuant to which it sold and assigned $1,475,000 of future receipts (the "Purchased Amount") in exchange for net cash proceeds of $910,000. Under the agreement, the Company agreed to pay the third party $43,382 weekly until the Purchase Amount has been collected.

Except as otherwise indicated above, the proceeds of the foregoing loans and other arrangements were used to augment the Company's working capital. See Note 14 for more information regarding notes payable agreements entered subsequent to December 31, 2024.

NOTE 8—STOCKHOLDERS' DEFICIT

Warrant — In September 2022, in connection with the loans from Dr. Niihara and his wife, the Company granted Dr. Niihara a five-year warrant to purchase up to 500,000 shares of common stock of the Company at an exercise price of $2.50 per share. Under ASC 480-10 and ASC 815, the warrant is classified as a liability. The fair value of the warrant liability was determined using Black-Scholes Merton model. For the year ended December 31, 2023, the Company recorded the change in fair value of $52,000 in the consolidated statement of operations. The warrant expired by its terms in November 2023.

Warrant issued for services - On January 12, 2023, the Company granted Dr. Niihara a five-year warrant to purchase up to 7,500,000 shares of common stock of the Company at an exercise price of $4.50 in lieu of cash bonuses or salary increases. The fair value of the warrant was determined using the Black-Scholes Merton option pricing model. The fair value of the underlying shares was determined based on the market value of the Company's common stock. The expected volatility was adjusted using the historical volatility of the Company's common stock and comparable publicly traded securities. The Company recorded the change in fair value of $874,000 in the consolidated statements of operations. The warrant expired by its terms in November 2023.

On January 12, 2023, the Company also granted two consultants to the Company five-year warrants to purchase up to 250,000 shares of common stock each at an exercise price of $0.50 a share. On January 27, 2023, the Company granted a consulting company a five-year warrant to purchase up to 500,000 shares of common stock at an exercise price of $0.47 a share. The warrants are subject to adjustment in the event of a stock split, reverse stock split and similar events. The fair value of the warrants was determined using the Black-Scholes Merton option pricing model. The fair value of the underlying shares was determined based upon the market value of the common stock. The expected volatility was adjusted using the historical volatility of the common stock and the market price of comparable publicly traded securities. Under ASC 480-10 and ASC 815, the warrants are classified as a liability. or the years ended December 31, 2024 and 2023, the Company recorded the change in fair value of $57,000 and $269,000, respectively, in the consolidated statements of operations.

The following table presents the assumptions used to value the warrants:

	December 31, 2024	December 31, 2023
Stock price	$ 0.01	$ 0.10
Exercise price	$0.47 - $0.50	$0.47 - $0.50
Expected term	3.03-3.07 years	4.03-4.24 years
Risk-free rate	4.27%	3.90%-3.92%
Dividend yield	—	—
Volatility	444.84%-447.87%	129.40%-130.23%

A summary of the Company's warrants activity for the years ended December 31, 2024 and 2023 is presented below:

	December 31, 2024		December 31, 2023	
	Number of Warrants	Weighted Average Exercise Price	Number of Warrants	Weighted Average Exercise Price
Warrants outstanding, beginning of year	4,732,391	$ 0.95	6,610,520	$ 2.22
Granted	—	$ —	8,500,000	$ 4.03
Exercised	—	$ —	—	$ —
Cancelled, forfeited and expired	(107,391)	$ 7.21	(10,378,129)	$ 4.23
Warrants outstanding, end of year	4,625,000	$ 0.81	4,732,391	$ 0.95
Warrant exercisable, end of year	4,625,000	$ 0.81	4,732,391	$ 0.95

As of December 31, 2024, the weighted-average remaining contractual life of outstanding warrants was 1.1 years.

Stock options — The Company's former 2011 Stock Incentive Plan permitted grants of incentive stock options to employees, including executive officers, and other share-based awards such as stock appreciation rights, restricted stock, stock units, stock bonus and unrestricted stock awards to employees, directors, and consultants for up to 9,000,000 shares of common stock. Options granted under the 2011 Stock Incentive Plan generally expire ten years after grant. Options granted to directors vest in quarterly installments and all other option grants vest over a minimum period of three years, in each case, subject to continuous service with the Company. The 2011 Stock Incentive Plan expired in May 2021 and no further awards may be made under the Plan. As of December 31, 2024 and December 31, 2023, stock options to purchase up to 1,461,443 shares and 1,728,773 shares, respectively, were outstanding under the 2011 Stock Incentive Plan.

The Company also had an Amended and Restated 2012 Omnibus Incentive Compensation Plan under which the Company could grant incentive stock options to selected employees including officers, non-employee consultants and non-employee directors. The Plan was terminated in September 2021. As of December 31, 2024 and December 31, 2023, stock options to purchase up to 245,008 shares and 245,108 shares, respectively, were outstanding under the Amended and Restated 2012 Omnibus Incentive Plan.

On September 29, 2021, the Board of Directors of the Company adopted the Emmaus Life Sciences, Inc. 2021 Stock Incentive Plan upon the recommendation of the Compensation Committee of the Board. The 2021 Stock Incentive Plan was approved by stockholders on November 23, 2021. No more than 4,000,000 shares of common stock may be issued pursuant to awards under the 2021 Stock Incentive Plan. The number of shares available for Awards, as well as the terms of outstanding awards, is subject to adjustment as provided in the Stock Incentive Plan for stock splits, stock dividends, reverse stock splits, recapitalizations and other similar events. During the year ended December 31, 2024, the Company granted options to purchase 1,620,000 shares, 300,000 shares and 440,000 shares of common stock to employees, non-employee directors and a consultant, respectively. During the year ended December 31, 2023, the Company granted options to purchase 850,000 shares, 300,000 shares and 100,000 shares of common stock to employees, non-employee directors and a consultant, respectively. All options are exercisable for ten years from the date of grant and will vest and become exercisable with respect to the underlying shares over three years for employees, one year for non-employee directors and immediately for the consultant. As of December 31, 2024 and December 31, 2023, stock options to purchase up to 3,580,833 and 1,250,000 shares, respectively, were outstanding under the 2021 Stock Incentive Plan.

Management has valued stock options at their date of grant utilizing the Black-Scholes-Merton Option pricing model. The fair value of the underlying shares was determined by the market value of the Company's common stock. The expected volatility was adjusted using the historical volatility of the common stock and comparable publicly traded securities. The following table presents the assumptions used on the recent dates on which options were granted by the Company. The risk-free interest rate is based on the implied yield available on U.S. Treasury issues with a term approximating the expected life of the options depending on the date of the grant and expected life of the respective options.

	January 2024	January 2023
Stock price	$ 0.11	$ 0.31
Exercise price	$ 0.15	$ 4.50
Expected term	5-5.75 years	5-6 years
Risk-free rate	3.80-3.81%	3.51-3.53%
Dividend yield	—	—
Volatility	127.39-136.00%	108.16-116.40%

The risk-free interest rate is based on the implied yield available on U.S. Treasury issues with a term approximating the expected life of the options depending on the date of the grant and expected life of the respective options.

A summary of the Company's stock option activity for the years ended December 31, 2024 and 2023 is presented below:

	December 31, 2024		December 31, 2023	
	Number of Options	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price
Options outstanding, beginning of year	3,223,881	$ 5.97	4,660,787	$ 5.08
Granted or deemed issued	2,360,000	$ 0.15	1,250,000	$ 4.50
Exercised	—	$ —	—	$ —
Cancelled, forfeited and expired	(296,597)	$ 0.34	(2,686,906)	$ 3.74
Options outstanding, end of year	5,287,284	$ 3.54	3,223,881	$ 5.97
Options exercisable at end of year	4,819,920	$ 3.59	2,373,881	$ 6.50
Options available for future grant	419,167		2,750,000	

During the years ended December 31, 2024 and 2023, the Company recognized approximately $256,000 and $1.2 million, respectively of share-based compensation expense. As of December 31, 2024, there was approximately $50,000 of total unrecognized compensation cost related to unvested share-based compensation awards outstanding under the 2021 Stock Incentive Plan. That cost is expected to be recognized over the weighted-average remaining period of 1.05 years.

Amended and Restated Warrants – The Company evaluated its outstanding amended and restated warrants to purchase up to 2,381,300 shares of common stock under ASC 815-40 and concluded that the warrants should be accounted for as equity.

In January 2023, the exercise price of outstanding amended and restated warrants was reduced to $0.37 per share pursuant to the anti-dilution adjustment provisions of the warrants triggered by the conversion of an outstanding convertible promissory note into shares of common stock of the Company at a conversion price $0.37 per share. The warrants were valued using the Black-Scholes Merton option pricing model and approximately $41,000 in change in fair value was recorded as additional paid-in capital and reflected in accumulated deficit.

In December 2023, the exercise price of outstanding amended and restated warrants was reduced to $0.29 per share pursuant to the anti-dilution adjustment provisions of the warrants triggered by the exchange of an outstanding convertible note and a promissory note into shares of common stock of the Company at an exchange price $0.29 per share. The warrants were valued using the Black-Scholes Merton option pricing model and approximately $11,000 in change in fair value was recorded as additional paid-in capital and reflected in accumulated deficit.

NOTE 9—INCOME TAXES

The provision for income taxes consists of the following for the years ended December 31, 2024 and 2023 (in thousands):

	2024	2023
Current		
U.S.	$ 7	$ (94)
International	22	35
Deferred		
U.S.	—	—
International	—	—
	$ 29	$ (59)

Deferred tax assets consisted of the following as of December 31, 2024 and 2023 (in thousands):

	2024	2023
Net operating loss carryforward	$ 19,478	$ 17,564
General business tax credit	12,154	12,085
Stock options	1,122	6,792
Charitable contribution	7	—
Accrued expenses	237	310
Unearned revenue	2,605	2,603
Allowance for bad debt	253	545
Unrealized gain on foreign exchange translation and others	1,314	1,295
Section 174 Expenditures	322	420
Unrealized gain on long term investment	—	30
Other	1,772	1,678
Total gross deferred tax assets	39,264	43,322
Less valuation allowance	(38,838)	(42,895)
Net deferred tax assets	$ 426	$ 427

Deferred tax liabilities consisted of the following as of December 31, 2024 and 2023 (in thousands):

	2024	2023
Unrealized loss on available-for-sale securities	$ (427)	$ (427)
Other	1	—
Total deferred tax liabilities	$ (426)	$ (427)

A valuation allowance for the net deferred tax assets is recorded when it is more likely than not that the Company will not realize these assets through future operations. The valuation allowance decreased by approximately $4.1 million and $1.2 million for the year ended December 31, 2024 and December 31, 2023, respectively.

As of December 31, 2024 and December 31, 2023, the Company had net operating loss carryforwards for federal income tax purposes of approximately $72.4 million and $65.1 million, respectively, available to offset future federal taxable income, if any. Net operating loss generated in 2017 and prior years expire in various years through 2037. Net operating losses for federal income tax purpose generated in 2018 and after will be available indefinitely. In addition, the Company had net operating loss carryforwards for state income tax purposes of approximately $65.3 million and $58.5 million respectively, which generally expire in 10 to 20 years. For some states, the net operating loss generated in 2018 and after will be available indefinitely. As of December 31, 2024 and December 31, 2023, the Company has general business tax credits of $12.2 million and $12.1 million, respectively, for federal income tax purposes. The tax credits are available to offset future tax liabilities, if any, through 2044. The Company's utilization of net operating loss carryforwards could be subject to an annual limitation as a result of certain past or future events, such as stock sales or other equity events constituting a "change in ownership" under the provisions of the Internal Revenue Code of 1986, as amended, and similar state provisions. The annual limitations could result in the expiration of net operating loss carryforwards and tax credits before they can be utilized.

The income tax provision differs from that computed using the statutory federal tax rate of 21% due to the following factors (in thousands):

	2024	2023
Tax benefit at statutory federal rate	$ (1,351)	$ (851)
State taxes, net of federal tax benefit	(317)	(173)
Increase in valuation allowance	(4,058)	(1,224)
Permanent items	(10)	73
General business tax credit	(68)	(285)
Other comprehensive income, tax benefit	—	(100)
Stock options deferred true-up	5,674	—
Other	159	2,501
	$ 29	$ (59)

As of December 31, 2024 and December 31, 2023, the Company had no unrecognized tax benefits or position which, in the opinion of management, would be reversed if challenged by a taxing authority. In the event the Company is

assessed interest or penalties, such amounts would be classified as income tax expense. As of December 31, 2024, all federal tax returns since 2021 are subject to audit. The expiration of the state returns varies by state, but the 2020 and subsequent years' returns generally are subject to audit. No tax returns are currently being examined by taxing authorities.

NOTE 10—LEASES

Operating leases — During the years ended December 31, 2024 and 2023, the Company leased its office space under operating leases with unrelated entities.

Prior to November 2024, the Company leased 21,293 square feet of office space for its headquarters in Torrance, California, at a base rental of $90,069 per month pursuant to lease, as amended, which was to expire on September 30, 2026. In November 2024, the lease was amended to, among other things, reduce the leased space to 4,639 square feet at a base rental of $18,556 per month and to provide for the upfront payment of approximately $58,483 to fund the cost of demising work on the former leased space. The amended lease became effective on April 2, 2025 and will expire on April 1, 2030. In addition, the Company leases 2,326 square feet of office space in Dubai, United Arab Emirates, at a base rental of AED 11,707 (approximately $3,000) per month, which will expire on June 19, 2026.

Rent expense was $1.1 million and $1.2 million for years ended December 31, 2024 and 2023, respectively.

Future minimum lease payments were as follows as of December 31, 2024 (in thousands):

	Amount
2025	$ 2,577
2026	846
Total future minimum lease payments	3,423
Less: Interest	(185)
Current portion	(2,423)
Operating lease liabilities, less current portion	$ 815

As of December 31, 2024 and 2023, the Company had an operating lease right-of-use asset of $1.5 million and $2.3 million, respectively and lease liability of $3.2 million and $3.5 million, respectively. As of December 31, 2024 and 2023, the weighted-average discount rate was 12.9%. The weighted average remaining term of the Company's leases as of December 31, 2024 was 1.7 years.

NOTE 11—COMMITMENTS AND CONTINGENCIES

API Supply Agreement — On June 12, 2017, the Company entered into an API Supply Agreement (the "API Agreement") with Telcon pursuant to which Telcon paid the Company approximately $31.8 million in consideration of the right to supply 25% of the Company's requirements for bulk containers of PGLG for a fifteen-year term. The amount was recorded as deferred trade discount. On July 12, 2017, the Company entered into a raw material supply agreement with Telcon which revised certain terms of the API supply agreement (the "revised API agreement"). The revised API agreement is effective for a term of five years and will renew automatically for 10 successive one-year renewal periods, except as either party may determine. In the revised API agreement, the Company has agreed to purchase a cumulative total of $47.0 million of PGLG over the term of the agreement. The revised API agreement provided for an annual API purchase target of $5 million and a target "profit" (*i.e.,* gross margin) to Telcon of $2.5 million. To the extent these targets are not met, Telcon may be entitled to payment of the shortfall or to offset the shortfall against the Telcon convertible bond and proceeds there of that are pledged as collateral to secure our obligations. In September 2018, the Company entered into an agreement with Ajinomoto and Telcon to facilitate Telcon's purchase of PGLG from Ajinomoto for resale to the Company under the revised API agreement. The PGLG raw material purchased from Telcon is recorded in inventory at net realizable value and the excess purchase price is recorded against deferred trade discount. Refer to Notes 5 and 6 for more information.

Standby Letter of Credit —During 2023, the Company engaged third party foreign advisors, who proposed to arrange a $10 million standby letter of credit in favor of the Company to support a possible strategic transaction in return for which the Company was to pay a total of $650,000 in two installments. To facilitate the standby letter of credit arrangement, the Company agreed to deposit the fee in the foreign advisors trust account of a law firm purporting to act on behalf of the foreign advisors which was to be released from the client trust account only upon receipt of the standby letter of credit. After exchange of documentation regarding the standby letter of credit arrangement between the Company and the foreign advisors

and the fee being released from the law firm's trust account by the Company, the standby letter of credit received by the Company was determined to be fraudulent. The payment of $650,000 is included in the general and administrative expenses in the consolidated statements of operations. Although the Company has demanded a return of the $650,000 fee from the foreign advisors and has filed reports with the FBI, management believes that the likelihood of recovery is unlikely.

NOTE 12—RELATED PARTY TRANSACTIONS

The following table sets forth information relating to our loans from related persons outstanding at any time during the year ended December 31, 2024 (in thousands except for conversion rate and share information):

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding December 31, 2024	Highest Principal Outstanding	Amount of Principal Repaid or Converted into Stock	Amount of Interest Paid
Promissory note payable - related parties:								
	Willis Lee(2)	12%	10/29/2020	On Demand	100	100	—	2
	Soomi Niihara(1)	12%	12/7/2021	On Demand	700	700	—	—
	Hope International Hospice, Inc.(1)	10%	2/9/2022	On Demand	350	350	—	—
	Hope International Hospice, Inc.(1)	10%	2/15/2022	On Demand	210	210	—	—
	Soomi Niihara(1)	10%	2/15/2022	On Demand	100	100	—	—
	Hope International Hospice, Inc.(1)	12%	3/15/2022	On Demand	150	150	—	—
	Hope International Hospice, Inc.(1)	12%	3/30/2022	On Demand	150	150	—	—
	Wei Peu Zen(2)	10%	3/31/2022	On Demand	200	200	—	—
	Albert Niihara(1)	10%	4/4/2022	On Demand	350	500	150	—
	Willis Lee(2)	10%	4/14/2022	On Demand	45	45	—	—
	Albert Niihara(1)	10%	4/19/2022	On Demand	250	250	—	—
	Hope International Hospice, Inc.(1)	10%	5/25/2022	On Demand	40	40	—	—
	Dr. Yutaka and Soomi Niihara(1)	12%	7/27/2022	5 years	402	402	—	44
	Dr. Yutaka and Soomi Niihara(1)	10%	8/16/2022	5 years	250	250	—	23
	Dr. Yutaka and Soomi Niihara(1)	10%	8/16/2022	5 years	1,669	1,669	—	153
	Hope International Hospice, Inc.(1)	10%	8/17/2022	On Demand	50	50	—	—
	Hope International Hospice, Inc.(1)	10%	10/20/2022	On Demand	100	100	—	—
	Hope International Hospice, Inc.(1)	10%	3/17/2023	On Demand	100	100	—	—
	Dr. Yutaka and Soomi Niihara(1)	10%	3/21/2023	On Demand	127	127	—	—
	Wei Peu Zen(2)	60%	12/1/2023	2 months	350	700	350	70
				Subtotal	**$ 5,693**	**$ 6,193**	**$ 500**	**$ 292**
				Total	**$ 5,693**	**$ 6,193**	**$ 500**	**$ 292**

The following table sets forth information relating to our loans from related persons outstanding at any time during the year ended December 31, 2023 (in thousands except for conversion rate and share information):

Class	Lender	Interest Rate	Date of Loan	Term of Loan	Principal Amount Outstanding December 31, 2023	Highest Principal Outstanding	Amount of Principal Repaid or Converted into Stock	Amount of Interest Paid
Current, Promissory note payable to related parties:								
	Willis Lee(2)	12%	10/29/2020	Due on Demand	$ 100	$ 100	—	—
	Soomi Niihara(1)	12%	12/7/2021	Due on Demand	700	700	—	—
	Hope International Hospice, Inc.(1)	10%	2/9/2022	Due on Demand	350	350	—	—
	Hope International Hospice, Inc.(1)	10%	2/15/2022	Due on Demand	210	210	—	—
	Soomi Niihara(1)	10%	2/15/2022	Due on Demand	100	100	—	—
	Hope International Hospice, Inc.(1)	12%	3/15/2022	Due on Demand	150	150	—	—
	Hope International Hospice, Inc.(1)	12%	3/30/2022	Due on Demand	150	150	—	—
	Wei Peu Zen(2)	10%	3/31/2022	Due on Demand	200	200	—	—
	Willis Lee(2)	10%	4/14/2022	Due on Demand	45	45	—	—
	Hope International Hospice, Inc.(1)	10%	5/25/2022	Due on Demand	40	40	—	—
	Yutaka and Soomi Niihara(1)	12%	7/27/2022	5 years	402	402	—	48
	Hope International Hospice, Inc.(1)	10%	8/15/2022	Due on Demand	—	50	50	2
	Yutaka and Soomi Niihara(1)	10%	8/16/2022	5 years	250	250	—	25
	Yutaka and Soomi Niihara(1)	10%	8/16/2022	5 years	1,669	1,669	—	167
	Hope International Hospice, Inc.(1)	10%	8/17/2022	Due on Demand	50	50	—	—
	Yutaka and Soomi Niihara(1)	10%	8/17/2022	Due on Demand	—	60	60	6
	Seah Lim(2)	6%	9/16/2022	3 years	—	1,200	1,200	90
	Hope International Hospice, Inc.(1)	10%	10/20/2022	Due on Demand	100	100	—	—
	Hope International Hospice, Inc.(1)	10%	3/17/2023	Due on Demand	100	100	—	—
	Yutaka and Soomi Niihara(1)	10%	3/21/2023	Due on Demand	127	127	—	—
	Wei Peu Zen(2)	60%	12/1/2023	2 months	700	700	—	—
				Subtotal	**5,443**	**6,753**	**1,310**	**338**
Convertible note payable - related parties:								
	Wei Peu Zen(2)	10%	1/18/2023	1 - 2 years	—	1,000	1,000	91
				Subtotal	—	**1,000**	**1,000**	**91**
				Total	**$ 5,443**	**$ 7,753**	**$ 2,310**	**$ 429**

(1) Dr. Niihara, a former director, Chairman of the Board and Chief Executive Officer of the Company, is also a director and the Chief Executive Officer of Hope International Hospice, Inc.
(2) Officer or director.

See Note 5 for a discussion of the sale of the Company's EJ Holdings shares to Niihara International, Inc., formed by Dr. Niihara and the related loan receivable from EJ Holdings.

See Note 8 for a discussion of the amendment to the previously issued warrant to Dr. Niihara.

See Notes 6 and 11 for a discussion of the Company’s distribution and supply agreements with Telcon, which holds 4,147,491 shares of the Company common stock, or approximately 6.5% of the common stock outstanding as of December 31, 2024. The Company holds an investment in a convertible bond of Telcon in the principal amount of KRW 20.1 billion, or approximately $13.6 million as of December 31, 2024, which matures on October 16, 2030 and bears interest at 2.1% a year, payable quarterly. See Note 5 for more information regarding the investment in convertible bond.

NOTE 13—DEFINED CONTRIBUTION PLAN

The Company has a defined contribution plan (the “401(k) Plan”) covering substantially all the Company’s employees. The Emmaus 401(k) Plan is a tax-qualified retirement saving plan, pursuant to which covered employees are able to contribute the lesser of 90% of their eligible annual compensation or the limit prescribed by the Internal Revenue Service (the “IRS”) to the 401(k) Plan on a before-tax basis. The Company matches 50% of employee contributions to the Company’s 401(k) Plan based on each participant’s contribution during the plan year up to 4.0% of each participant’s annual compensation.

For the years ended December 31, 2024 and 2023, the Company made matching contributions to the Company’s 401(k) Plan of $66,000 and $78,000, respectively.

NOTE 14—SUBSEQUENT EVENTS

In February 2025, the Company entered into an Agreement for the Purchase and Sales of Future Receipts with a third party pursuant to which it sells $1,908,000 of future receipts (the "Purchased Amount") in exchange for net proceeds of $1,325,000. Under the agreement, the Company agrees to pay the third party approximately $49,000 weekly until the Purchased Amount has been collected.

Exhibit 10.9

FOURTH AMENDMENT TO OFFICE LEASE AGREEMENT

This FOURTH AMENDMENT TO OFFICE LEASE AGREEMENT (this "**Fourth Amendment**") is made effective as of November 20, 2024 (the "**Effective Date**"), by and between RREF II PACIFIC CENTER LLC, a Delaware limited liability company ("**Landlord**"), and EMMAUS LIFE SCIENCES, INC., a Delaware corporation ("**Tenant**"). Landlord and Tenant are each sometimes referred to herein as a "**Party**" and collectively as the "**Parties**".

R E C I T A L S:

A.Bixby Torrance, LLC, a Delaware limited liability company ("**Bixby**") and Tenant entered into that certain Office Lease Agreement dated October 17, 2014 (the "**Original Lease**"), as amended by that certain (i) Statement of Tenant Regarding Lease Commencement (undated) (the "**Tenant Statement**") executed by Tenant, (ii) First Amendment to Office Lease Agreement dated February 1, 2018 (the "**First Amendment**") between Landlord (as successor-in-interest to Bixby) and Tenant, (iii) Second Amendment to Office Lease Agreement dated December 6, 2018 (the "**Second Amendment**") between Landlord (as successor-in-interest to Bixby) and Tenant, and (iv) Third Amendment to Office Lease Agreement dated September 10, 2019 (the "**Third Amendment**") between Landlord and Tenant. The Original Lease, the Tenant Statement, the First Amendment, the Second Amendment and the Third Amendment are collectively referred to herein as the "**Lease**".

B.Pursuant to the Lease, Landlord is currently leasing to Tenant and Tenant is currently leasing from Landlord that certain space (collectively, the "**Existing Premises**") containing approximately 21,293 rentable square feet commonly known as Suite 800 and located on the eighth (8th) floor of that certain office building located at 21250 Hawthorne Blvd., Torrance, CA 90503 (the "**Building**"), all as more particularly set forth in the Lease.

C.As of the Effective Date: (i) Tenant has failed to pay to Landlord certain amounts of Rent in the total amount of $1,359,062.77 (collectively, the "**Past Due Amount**"); and
(ii) Landlord applied the entire Security Deposit held by Landlord under the Lease (in an amount equal to $160,000.00) towards certain other outstanding Rent amounts and Tenant has failed to replenish the Security Deposit to equal the full Security Deposit as stated hereinabove (such amount, the "**Full SD Replenishment Amount**").

D.In connection with the Past Due Amount and Full SD Replenishment Amount, Landlord sent to Tenant that certain (i) Three-Day Notice of Default Regarding Payment of Rent dated May 28, 2024 (the "**Rent Default Notice**"), and (ii) Notice Regarding Breach and Application of Security Deposit; Demand for Restoration of Security Deposit dated May 28, 2024 (the "**SD Replenishment Default Notice**" and together with the Rent Default Notice, the "**Tenant Default Notices**").

E.Tenant, through various correspondence with Landlord and Landlord's agents (the "**Default Response**"), disputes the claims in the Tenant Default Notices and alleged certain defenses in connection therewith (the "**Tenant Defenses**").

F.As used herein, the "**Existing Dispute**" shall mean: (i) the Tenant Default Notices

and Landlord's claims thereunder; (ii) Tenant's breach of the Lease under the Tenant Default Notices and in connection with all other amounts of the Past Due Amount; and (iii) the Tenant Defenses.

G.Landlord and Tenant now desire to amend the Lease to (i) settle the Existing Dispute, and (ii) in connection therewith, modify certain terms and provisions of the Lease, all as hereinafter provided, including, without limitation: (A) conditionally waiving Tenant's obligation to pay the Conditionally Waived Pre-Reduction Base Rent Amount as defined and set forth hereinbelow; (B) reducing the total Security Deposit and amount to be replenished; (C) providing for Tenant's deferred repayment of the Past Due Amount; (D) reduce the size of the Existing Premises by deducting therefrom that certain portion of the Existing Premises (referred to herein as the "**Reduction Premises**") containing approximately 4,639 rentable square feet, as depicted on **Exhibit A** attached hereto; and (E) extend the Second Extended Term and Expansion Space Term (i.e., the existing co-terminus lease terms) for the Fourth Amendment Term (as defined below) with respect to the Remaining Premises (as defined below).

H.Except as otherwise set forth herein, all capitalized terms used in this Fourth Amendment shall have the same meaning as such terms have in the Lease.

NOW, THEREFORE, in consideration of the foregoing Recitals and the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Settlement of Existing Dispute. Notwithstanding anything in the Lease (as hereby amended) to the contrary, but subject to the covenants, terms and conditions set forth below in this Fourth Amendment, in partial consideration for each Party executing this Fourth Amendment and as full compensation to each Party for any and all costs, damages and losses suffered or incurred by such party with respect to and/or in connection with the Existing Dispute:

1.1 Mutual Releases. Upon the mutual execution and delivery of this Fourth Amendment:

1.1.1 Landlord and Tenant, on behalf of themselves, and each of their respective past, present and future owners, parents, predecessors, subsidiaries, affiliates, partners, members, managers, officers, directors, shareholders, employees, agents, successors, assigns, heirs, trustees, beneficiaries, attorneys, administrators, and executors, in their capacity as such, hereby release and forever discharge the other and each of the other's respective past, present and future owners, parents, predecessors, subsidiaries, affiliates, partners, members, managers, officers, directors, shareholders, employees, agents, successors, assigns, heirs, trustees, beneficiaries, administrators, and executors, in their capacity as such, of and from any and all charges, complaints, claims, liabilities, obligations, promises, agreements, damages, actions, causes of action, suits, rights, demands, costs, losses, debts, and expenses (including attorneys' fees and costs) actually incurred, of any nature whatsoever, known or unknown, suspected or unsuspected, which, as of the Effective Date, such Party now has, owns or holds, or claims to have owned or held, or which one Party at any time heretofore has owned or held, or claimed to have

had, owned or held, against the other Party, with respect to the Existing Dispute (collectively, the "**Released Existing Dispute Claims**").

1.1.2The Parties acknowledge that they might hereafter discover facts different from or in addition to those they now know or believe to be true with respect to the Released Existing Dispute Claims, and they expressly agree to assume the risk of possible discovery of additional or different facts, and agree that the terms contained in this Fourth Amendment shall be and remain effective in all respects regardless of such additional or different discovered facts, or any change in circumstances.

1.1.3The Parties expressly acknowledge and agree that the foregoing release contained in this Section 1.1 does not apply to, affect or cover any claims, rights, demands, suits, actions or causes of action, losses, costs, obligations, liabilities, expenses, debts or duties which Landlord and Tenant may have under, arising out of, or relating to the Lease (as hereby amended) first arising after the Effective Date, all of which matters are expressly reserved.

1.1.4The Parties will bear their own respective costs and attorneys' fees in connection with the Existing Dispute and this Fourth Amendment. However, if any action is filed with respect to the Lease (as hereby amended), including but not limited to any action for unlawful detainer or to enforce the Lease (as hereby amended), then all costs and expenses incurred by the prevailing party therein (including, without limitation, its actual appraisers', accountants', attorneys' and other professional fees and court costs) shall be paid by the other party.

1.2 Waiver of California Code of Civil Procedure Section 1542. With respect to the Released Existing Dispute Claims set forth above, and those claims only, the Parties acknowledge that they have either been advised by legal counsel or have made themselves familiar with the provisions of California Civil Code section 1542, which provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

The Parties, being aware of the above code section, hereby expressly waive any rights they may have thereunder, as well as under any other statutes or common-law principles of similar effect pertaining to the Released Existing Dispute Claims.

2.Conditionally Waived Pre-Reduction Base Rent Amount. Subject to Tenant's potential repayment obligations under Sections 3.2 and 14 below, as the case may be, Landlord hereby agrees to conditionally waive Tenant's obligation to otherwise pay a portion of each monthly installment of Base Rent otherwise due and payable by Tenant during the period from September 1, 2024 (on a retroactive basis, as applicable) through and including the day immediately preceding the Reduction Date, as defined below, such that the Base Rent due and payable by Tenant for the Existing Premises during such period shall be conditionally revised to a total of $18,556.00 per month (calculated based on 4,639 rentable square feet and a Base Rent

monthly rental rate of $4.00 per rentable square foot) (the "**Special Revised Base Rent**"). The applicable difference between the amount of the Special Revised Base Rent and the applicable monthly installment of Base Rent that would otherwise be due and payable by Tenant under the Lease for the Existing Premises without the foregoing conditional waiver is sometimes referred to as the "**Conditionally Waived Pre-Reduction Base Rent Amount**".

3. Reduction Premises.

3.1 Termination of Reduction Premises. Notwithstanding anything to the contrary contained in the Lease, as hereby amended, but subject to Section 3.6 below, the Lease with respect to the Reduction Premises shall terminate and be of no further force and effect as of the end of the day on the date (the "**Reduction Date**") that Landlord causes the Demising Work to be Substantially Completed (as such terms are defined in Section 3.3 below) in the Remaining Premises. Accordingly, effective from and after the date immediately following the Reduction Date, the remaining premises leased by Tenant under the Lease, as hereby amended, shall consist solely of the remaining portion of the Existing Premises other than the Reduction Premises (i.e., a total of approximately 16,654 rentable square feet as depicted on **Exhibit A** attached hereto) (sometimes referred to herein as the "**Remaining Premises**"), and all references to the "Premises" in the Lease shall mean and refer to the Remaining Premises. Notwithstanding the termination of the Lease, as hereby amended, with respect to the Reduction Premises as provided herein or any provision of this Amendment to the contrary, Tenant shall remain liable for: (i) all of its obligations as Tenant under the Lease, as hereby amended, with respect to the Reduction Premises arising prior to and including the Reduction Date; and (ii) all of Tenant's indemnification and other obligations with respect to the Reduction Premises which expressly survive termination of the Lease, as hereby amended.

3.2 Surrender of Reduction Premises. Tenant covenants to surrender and deliver exclusive possession of the Reduction Premises to Landlord on or before the Reduction Date in accordance with the applicable vacation and surrender provisions of the Lease, including, without limitation, Sections 8 and 26 of the Original Lease. Following the Reduction Date, Tenant shall not enter, occupy or use the Reduction Premises. If Tenant does not so vacate and surrender exclusive possession of the Reduction Premises to Landlord on or before the Reduction Date, then Tenant shall be deemed to be in holdover of the Reduction Premises subject to and in accordance with Section 22 of the Original Lease (provided, that, notwithstanding anything in this Lease, as hereby amended, to the contrary: (i) the holdover rent therein shall be calculated at 150% of the total Base Rent due and payable for the Existing Premises without regard to any discounted amounts as a part of the Conditionally Waived Pre-Reduction Base Rent Amount; and (ii) the accrual of the Conditionally Waived Pre-Reduction Base Rent Amount shall immediately cease as of the start of such holdover period and any then-accrued Conditionally Waived Pre-Reduction Base Rent Amount shall immediately be due and payable by Tenant to Landlord).

3.3 Demising Work and Costs. Notwithstanding Section 7 below to the contrary, Landlord shall, using Building standard materials and in accordance with Building standards, perform the following work (collectively, the "**Demising Work**"): (i) construct the required demising wall(s) to separate the Remaining Premises and the Reduction Premises; and
(ii) separate the electrical, HVAC and other systems and equipment serving the Reduction Premises from such systems and equipment serving the Remaining Premises (as and to the extent

necessary, as reasonably determined by Landlord). Subject to potential future reimbursement by Landlord as and to the extent set forth in Section 15 below, Tenant shall pay for all costs of the design, permitting and construction of the Demising Work (collectively, the "**Demising Work Costs**"), which payment shall be made to Landlord as set forth hereinbelow. Concurrently with Tenant's execution and delivery of this Fourth Amendment, Tenant shall deliver to Landlord an amount equal to $58,482.50 as the currently estimated Demising Work Costs. Following the date that the Demising Work is completed, Landlord shall provide Tenant with a written reconciliation of the total Demising Work Costs as compared to the estimated Demising Work Costs previously paid by Tenant, and Tenant shall pay to Landlord any underpayment of Demising Work Costs made by Tenant, or Landlord shall reimburse to Tenant any overpayment of Demising Work Costs made by Tenant, as the case may be, within thirty (30) days after Landlord's delivery of such written reconciliation to Tenant (together with reasonable supporting documentation therefor). For purposes of this Fourth Amendment, the Demising Work shall be deemed "**Substantially Completed**" upon the completion of the foregoing items substantially in accordance with this Section 3.3. If Landlord shall encounter any delays in causing the Demising Work to be Substantially Completed as a result of any acts or omissions of Tenant, or its agents, employees or contractors (collectively, "**Tenant Delays**"), then, notwithstanding anything to the contrary set forth in the Lease (as hereby amended), Tenant shall pay to Landlord, as Additional Rent under the Lease, as hereby amended, the product of the per diem amount of the Conditionally Waived Pre-Reduction Base Rent Amount for the entire Premises multiplied by the number of days of such Tenant Delays. Tenant shall deliver such payment to Landlord within thirty (30) days after Tenant's receipt of such statement from Landlord specifying such Tenant Delays (provided, that, Landlord acknowledges and agrees that any such amounts so paid by Tenant as the Conditionally Waived Pre-Reduction Base Rent Amount hereunder shall be deducted on a per diem basis from any other recovery of the Conditionally Waived Pre-Reduction Base Rent Amount that includes any such days for which the same was applicable, such that Landlord does not double recover any such amounts).

3.4 Acceptance of Inconveniences. The parties hereby agree that the Demising Work will be performed during Tenant's occupancy of the Premises, and in connection therewith, Tenant hereby acknowledges and agrees: (i) to accept any and all inconveniences associated with the performance of the Demising Work which may occur during such occupancy including, without limitation, dust, noise, etc.; (ii) that the performance of the Demising Work shall in no way constitute a constructive eviction of the Tenant under the Lease (as amended hereby) nor entitle Tenant to any abatement of rent payable pursuant to the Lease, as amended hereby; and (iii) Landlord shall not be liable to Tenant for, and Tenant shall not be entitled to any compensation or damages from Landlord for, loss of the use of all or any part of the Premises or of any personal property or improvements therein resulting from the performance of the Demising Work, or for any inconvenience or annoyance occasioned thereby or for any injury to or interference with Tenant's business.

3.5 Confirmation of Dates. After the Reduction Date occurs, Landlord shall deliver to Tenant a Confirmation of the Reduction Date on Landlord's commercially reasonable form, setting forth, among other things, the Reduction Date and the Fourth Amendment Term Expiration Date, which Confirmation of the Reduction Date Tenant shall execute and return to Landlord within five (5) business days after Tenant's receipt thereof. If Tenant fails to execute and return the Confirmation of the Reduction Date within such five (5) business day period, Tenant

shall be deemed to have approved and confirmed the dates set forth therein provided that such deemed approval shall not relieve Tenant of its obligation to execute and return the Confirmation of the Reduction Date (and such failure shall constitute a default by Tenant under the Lease, as amended hereby).

3.6 Effect of Pre-Reduction Default. Notwithstanding anything in the Lease, as hereby amended, to the contrary, if Tenant defaults beyond all applicable notice and cure periods under the Lease, as hereby amended, prior to the occurrence of the Reduction Date, then, at Landlord's option, without limiting any of Landlord's other rights and remedies under the Lease, at law and/or in equity, (i) there shall be no reduction of the Premises under this Fourth Amendment and there shall be no extension of the Lease Term for the Fourth Amendment Term (such that, the terms of Sections 3.1, 3.2, 3.3 and 3.5 above and Sections 4, 5, 6, 8, 9.3 and 15 below, shall be of no further force or effect, unless [and to the extent] illogical or inconsistent with the intention of this Fourth Amendment and this Section 3.6), and (ii) Tenant, at Tenant's sole cost and expense, shall reimburse Landlord for (A) all Demising Costs then-incurred by Landlord (taking into account any estimated Demising Work Costs previously paid by Tenant to Landlord) and (B) all actual, reasonable costs incurred by Landlord to remove any unfinished demising work and restore the same to the pre-demising work condition (which reimbursements/payments shall be made within ten [10] days after Tenant's receipt of invoice therefor from Landlord, together with reasonable supporting documentation).

4.Extension of Lease Term. The current Lease Term (i.e., the Second Extended Term and the Expansion Space Term), which is currently scheduled to expire on September 30, 2026, is hereby extended with respect to the Remaining Premises, only, for a term to expire on the date (the "**Fourth Amendment Term Expiration Date**") that is sixty (60) months after the Reduction Date, unless sooner terminated pursuant to the terms of the Lease, as hereby amended. The sixty (60) month period from the Reduction Date (sometimes, the "**Fourth Amendment Term Commencement Date**") through and including the Fourth Amendment Term Expiration Date shall be referred to herein as the "**Fourth Amendment Term**".

5. Base Rent.

5.1 Base Rent. During the Fourth Amendment Term, Tenant shall pay Base Rent to Landlord for the Remaining Premises in accordance with the following schedule (subject to the terms and conditions of Section 5.2 below):

Months of Fourth Amendment Term	Monthly Base Rental Rate per Rentable Square Foot of Remaining Premises	Annual Base Rent	Monthly Installment of Base Rent
1 – 12	$4.00	$222,672.00	$18,556.00
13 – 24	$4.12	$229,352.16	$19,112.68
25 – 36	$4.24	$236,032.32	$19,669.36
37 – 48	$4.37	$243,269.16	$20,272.43
49 – 60	$4.50	$250,506.00	$20,875.50

5.2 Special Payment. Notwithstanding anything in the Lease, as hereby amended, with respect to the Base Rent due and payable by Tenant under Section 5.1 above, Tenant shall pay the same to Landlord in pre-paid six (6) month installments (except, that, Landlord hereby acknowledges and agrees that the first [1st] such prepayment may be limited to a pre-paid amount of three (3) monthly installments); provided, that, if Tenant does not default under the Lease, as hereby amended, beyond all applicable notice and cure periods during the first twenty-four (24) months of the Fourth Amendment Term, then the special payment provisions set forth hereinabove shall cease and Tenant shall thereafter (commencing for the twenty-fifth [25th] month of the Fourth Amendment Term) pay such monthly installments of Base Rent in accordance with the terms and conditions of the Lease (i.e., on a monthly basis). For purposes of an example of the foregoing, if the Fourth Amendment Term commences on December 1, 2024, then Tenant shall pay the three (3) monthly installments of Base Rent for December 2024 through and including February 2025 to Landlord on or before December 1, 2024, the six (6) monthly installments of Base Rent for March 2025 through and including August 2025 to Landlord on or before March 1, 2025, the six (6) monthly installments of Base Rent for September 2025 through and including February 2026 to Landlord on or before September 1, 2025, etc. Such applicable prepaid Base Rent amounts shall constitute Tenant's irrevocable, absolute, and unconditional payment in advance of the applicable Base Rent due and payable under the Lease, as hereby amended, for such applicable 6-month (or 3-month, as the case may be) periods (each, as the case may be, a "**Prepaid Rent Period**"). Except for such foregoing amounts during the applicable Prepaid Rent Period, Tenant shall remain liable under the Lease, as hereby amended, for the timely payment of any and all other amounts and the performance of any other obligations due under the Lease, as hereby amended. Notwithstanding anything in the Lease, as hereby amended, or any provision under applicable law now or hereinafter in effect to the contrary, Landlord and Tenant acknowledge and agree that: (i) the applicable prepaid Base Rent amounts shall be immediately and fully earned by Landlord upon receipt and shall be non-refundable for any reason whatsoever;
(ii) once paid to Landlord, Tenant shall have no further right, title, or interest in the applicable prepaid Base Rent amounts and Tenant shall unconditionally and irrevocably relinquish, release, and waive any right, title or interest in the applicable prepaid Base Rent amounts; (iii) immediately upon receipt of the applicable prepaid Base Rent amounts by Landlord, Landlord shall apply the applicable prepaid Base Rent amounts in advance to the applicable Base Rent under the Lease for the applicable Prepaid Rent Period; and (iv) in the event the Lease, as hereby amended, is terminated for any reason whatsoever, including but not limited to, upon the Tenant's default or breach of the Lease or the rejection of the Lease, as hereby amended, in bankruptcy or otherwise, Tenant shall have no claim to or right of refund of the applicable prepaid Base Rent amounts. Landlord and Tenant further: (A) acknowledge and agree that in no event or circumstance shall the applicable prepaid Base Rent amounts be deemed to be or treated as a "security deposit" under any laws applicable to security deposits in the commercial context including Section 1950.7 of the California Civil Code, as such section now exists or as may be hereafter amended or succeeded or any similar laws, statutes, or ordinances now or hereinafter in effect ("**Security Deposit Laws**"),
(B) acknowledge and agree that the applicable prepaid Base Rent amounts is not intended to serve as a security deposit or to secure the performance of the Lease, as hereby amended, and the Security Deposit Laws shall have no applicability or relevancy thereto, and (C) waive any and all rights, duties, and obligations either party may now have or, in the future, will have relating to or arising from the Security Deposit Laws with respect to the applicable prepaid Base Rent amounts. Tenant also unconditionally and irrevocably waives any rights under Section 1951.7 of the

California Civil Code, including, but not limited to, any right to request notice under Section 1951.7(c) and any similar laws, statutes, or ordinances now or hereinafter in effect.

6. Tenant's Pro Rata Share of Taxes and Expenses. During the Fourth Amendment Term, Tenant's Pro Rata Share of Expense Excess and Tax Excess for the Remaining Premises shall equal 1.49% (i.e., 4,639 rentable square feet of the Existing Premises/310,638 rentable square feet of the Building); and (ii) the Base Year for purposes of calculating Expense Excess and Tax Excess for the Remaining Premises for the Fourth Amendment Term shall be calendar year 2018.

7. Condition of Premises. Tenant is currently in occupancy of the Premises (i.e., the Reduction Premises and the Remaining Premises) and shall continue occupancy of the same in its "AS IS" condition as of the Effective Date (and with respect to the Remaining Premises, as of the Reduction Date) without any agreements, representations, understandings or obligations on the part of the Landlord to perform or to pay for any alterations, repairs or improvements to the Premises, Building or Project, except as otherwise expressly set forth in Section 3.3 above with respect to the Demising Work.

8. Parking.

8.1 Revised Parking. Effective as of the Fourth Amendment Term Commencement Date, Section 6 of the Second Amendment shall be deleted and of no further force or effect. During the Fourth Amendment Term, in lieu of the twenty (20) Unreserved Parking Passes defined and set forth in Section 1.12 of the Original Lease, subject to the provisions of this Section 8 below, Tenant shall have the right, but not the obligation, to lease up to a total of sixteen (16) unreserved parking spaces (i.e., four [4] unreserved parking passes per each 1,000 rentable square feet of the Remaining Premises) (collectively, the "**Fourth Amendment Term Unreserved Parking Passes**") located in those portions of the parking facilities serving the Building designated by Landlord from time to time for unreserved parking for the Building. Upon written notice (the "**Parking Notice**") delivered by Tenant to Landlord prior to the Fourth Amendment Term Commencement Date, Tenant shall designate the number of Fourth Amendment Term Unreserved Parking Passes (but in no event more than sixteen [16]) that Tenant elects to rent during the Fourth Amendment Term. Tenant's failure to deliver to Landlord a Parking Notice prior to the Fourth Amendment Term Commencement Date designating the number of Fourth Amendment Term Unreserved Parking Passes (if any) that Tenant elects to Lease shall be deemed Tenant's election to lease all sixteen (16) of the Fourth Amendment Term Unreserved Parking Passes for the entire Fourth Amendment Term; provided, however, at any time during the Fourth Amendment Term, Tenant shall have the right upon thirty (30) days' advance written Parking Notice delivered by Tenant to Landlord from time to time to increase and/or decrease the number of Fourth Amendment Term Unreserved Parking Passes that Tenant shall rent (but in no event in excess of sixteen [16]). During the Fourth Amendment Term, Tenant's use of the Fourth Amendment Term Unreserved Parking Passes (if any) shall be free of any monthly parking charges. Tenant's use of the Fourth Amendment Term Unreserved Parking Passes shall otherwise be subject to the applicable terms and conditions of the Original Lease.

8.2 No Reserved Parking. Notwithstanding anything in the Lease to the contrary, effective as of the Fourth Amendment Term Commencement Date, Tenant shall have no rights to any reserved parking spaces under the Lease, as hereby amended.

8.3 Visitor Parking. Notwithstanding anything in this Section 8 above and/or Section 28.02 of the Original Lease to the contrary, during the Fourth Amendment Term, subject to availability as determined by Landlord in Landlord's sole absolute discretion, free of parking charges, Tenant's visitors shall continue to be permitted to park in those certain areas of the parking facilities serving the Building that are designated for visitor parking by Landlord from time to time.

9. Modified Signage.

9.1 Removal of Building Top Signage and Loss of Rights. Notwithstanding anything in the Lease, as hereby amended, effective as of the Effective Date, Tenant's right to maintain and display the Building Top Sign (as defined and set forth in Section 10.1 of the Second Amendment) shall be deleted and of no further force or effect, and following the mutual execution and delivery of this Fourth Amendment, Landlord, at Tenant's sole cost and expense, shall remove the same from the Building, repair all damage thereto and restore the portion of the Building where the Building Top Sign was located to its original condition prior to the installation of the Building Top Sign. Tenant shall reimburse Landlord for all such costs incurred by Landlord within thirty
(30) days after receipt of invoice therefor from Landlord, together with reasonable supporting documentation.

9.2 Removal of Monument Signage and Loss of Rights. Notwithstanding anything in the Lease, as hereby amended, effective as of the Effective Date, Tenant's right to maintain and display one (1) panel on the Monument Sign (as defined and set forth in Section 32 of the Original Lease, as last amended by Section 10.2 of the Second Amendment) shall be deleted and of no further force or effect, and following the mutual execution and delivery of this Fourth Amendment, Landlord, at Tenant's sole cost and expense, shall remove the panel from the Monument Signage and repair all damage thereto where the panel was located. Tenant shall reimburse Landlord for all such costs incurred by Landlord within thirty (30) days after receipt of invoice therefor from Landlord, together with reasonable supporting documentation.

9.3 Remaining Signage. For purposes of clarification, during the Fourth Amendment Term, Tenant shall continue to have the right to install one (1) identification sign at the entry doors of the Remaining Premises (and a listing on the electronic building directory), which shall otherwise be subject to and in accordance with the terms and conditions of Section 32 of the Original Lease.

10.Security Deposit Reduction. Effective as of the Effective Date: (i) the total amount of the Security Deposit to be held by Landlord under the Lease, as hereby amended, shall be reduced by $120,568.50 to a new revised total amount of $39,431.50; (ii) in connection therewith:
(A) concurrently with Tenant's execution and delivery of this Fourth Amendment, Tenant shall deliver to Landlord a portion of the Full SD Replenishment Amount equal to the revised total Security Deposit hereinabove (i.e., $39,431.50); and (B) Tenant shall have no obligation to deliver to Landlord the remaining portion of the Full SD Replenishment Amount in the amount of
$120,568.50 (the "**Waived SD Replenishment Amount**") and Tenant hereby forever relinquishes and releases all of its right, title and interest in and to the Waived SD Replenishment Amount and agrees that no such portion of the previous Security Deposit equal to the Waived SD

Replenishment Amount will be returned to Tenant notwithstanding anything to the contrary contained in the Lease (as hereby amended).

11.Deletion of Right of First Offer, Right of First Refusal and Extension Option. Effective as of the Effective Date, Sections 8, 9 and 11 of the Second Amendment shall be deleted and of no further force or effect, such that Tenant shall no longer have such expansion and/or renewal rights set forth therein.

12.Past Due Amount; Repayment Period. Notwithstanding any provisions of the Lease, as hereby amended, to the contrary, Landlord shall defer Tenant's obligation to pay the Past Due Amount (i.e., in the amount of $1,359,062.77) for repayment in accordance with the provisions of this Section 12 (subject to Section 13 below). Notwithstanding any such deferment, and subject to the applicable terms and conditions in this Fourth Amendment with respect to the Conditionally Waived Pre-Reduction Base Rent Amount, Tenant shall otherwise remain responsible for the payment of all of Tenant's other monetary obligations under the Lease, as hereby amended. On or before the first (1st) day of each calendar month during the scheduled sixty (60) month Fourth Amendment Term (herein, the "**Repayment Period**"), time being of the essence as to each such date, and in addition to timely paying, pursuant to the provisions of the Lease, all of its other monetary obligations under the Lease, as hereby amended, Tenant shall pay to Landlord (without notice or demand by Landlord) the Past Due Amount in monthly installments as set forth on **Exhibit B** attached hereto–. Any failure by Tenant to properly and timely pay the Past Due Amount pursuant to and in accordance with this Section 12 shall constitute a material default by Tenant under the Lease (as hereby amended). In no event shall Tenant's obligation to repay the Past Due Amount be abated for any reason whatsoever, including without limitation, pursuant to Sections 6 (as amended by Section 12.1 of the First Amendment), 16 and/or 17 of the Original Lease.

13.Accelerated Amount; Adverse Action. Notwithstanding any contrary provision of the Lease, as hereby amended, Landlord shall have the right, at its election, in addition to any other rights and remedies available to Landlord under the Lease, as hereby amended, at law and/or in equity, to (i) accelerate the Repayment Period provided for the Past Due Amount, and (ii) declare the remaining Past Due Amount (and/or the Conditionally Waived Pre-Reduction Base Rent Amount) to all be immediately due and payable in full by Tenant (the amounts set forth in clause
(ii) hereinabove, "**Accelerated Amount**"), upon the occurrence of any of the following (each, an "**Adverse Action**"): (A) any default by Tenant beyond all applicable notice and cure periods under the Lease, as hereby amended; (B) any termination of the Lease (as hereby amended), including pursuant to Sections 16 and 17 of the Original Lease; (C) a general assignment by Tenant for the benefit of creditors, or the taking of any corporate action in furtherance of bankruptcy or dissolution (whether or not there exists any proceeding under an insolvency or bankruptcy law), or the filing by or against Tenant of any proceeding under an insolvency or bankruptcy law; (D) the rejection, or deemed rejection, of the Lease, as hereby amended, in any insolvency or bankruptcy case or proceeding; (E) any assignment or attempted assignment of the Lease, as hereby amended, by the original Tenant executing this Fourth Amendment (the "**Original Tenant**") to any third party; or (F) a Confidentiality Breach (as defined below). Notwithstanding any contrary provision of the Lease, as hereby amended, the Past Due Amount shall constitute a part of the "Rent" (as that term is defined in the Original Lease) payable by Tenant in connection with the Premises. Landlord may include in any sums or amounts it seeks to recover from Tenant

the aggregate Past Due Amount the deferral of which has previously been granted by Landlord to Tenant, it being agreed by Tenant that deferral of the Past Due Amount has been granted by Landlord in consideration of Tenant not defaulting under the terms and conditions of the Lease, as hereby amended. Tenant agrees that Landlord may include the Accelerated Amount in any statutory notices (or notices required under the Lease, as hereby amended), that Landlord is required to give Tenant as a condition precedent to an action for recovery of possession of the Premises.

14.Sublease Rent. Without limiting anything in Section 13 above, and without limiting any of Landlord's other applicable rights and remedies with respect to a sublease and/or sublease rents under the Lease, as hereby amended, Tenant acknowledges and agrees that, notwithstanding anything in the Lease, as hereby amended, to the contrary (including, without limitation, Section 11 of the Original Lease), if Tenant enters into a new sublease (a "**New Sublease**") for all or any portion of the Premises during the Repayment Period, then, at Landlord's option, Tenant shall direct the subtenant under the New Sublease (the "**New Subtenant**") to pay to Landlord, on a direct basis, the rents and any other sums due and to become due under the Sublease (the "**Sublease Rents**"), which Sublease Rents, less any Transfer Premium Component, as defined and set forth hereinbelow (such Sublease Rents, less any Transfer Premium Component, the "**Available Sublease Rents**") will be immediately applied by Landlord as a credit against the balance of the Past Due Amount due and payable by Tenant under Section 12 above until such balance thereof is reduced to $0.00, but which application of such Available Sublease Rents by Landlord shall be credited to the last remaining monthly installments due and payable at the end of the Repayment Period in reverse order. Notwithstanding the foregoing, any portion of the Sublease Rents so received by Landlord that otherwise constitutes a part of the Transfer Premium under Section 11.02 of the Original Lease (any such portion, collectively, the "**Transfer Premium Component**") shall be retained by Landlord and not be applied to (or otherwise reduce) the Past Due Amount. For purposes of clarification, if Landlord so elects to receive the Sublease Rents as set forth hereinabove, Tenant shall not be relieved from otherwise repaying the Past Due Amount in the monthly installments under Section 12 above, but such repayment may be achieved faster through a combination of such monthly installments from Tenant that occur as scheduled from the beginning of the Repayment Period and the application of the Available Sublease Rents received directly by Landlord and credited to the end of the Repayment Period in reverse order. Following the date that the Past Due Amount is fully repaid, any such election by Landlord for direct payment of the Sublease Rents shall be of no further force and effect, and New Subtenant may commence payment thereof to Tenant under and in accordance with the New Sublease (subject, however, to Tenant's obligation to remit to Landlord any Transfer Premium Component, if applicable). If Landlord receives any over-payment of Available Sublease Rents (i.e., any excess after the Past Due Amount is reduced to $0.00), then, Landlord shall return the balance of such excess Available Sublease Rents to Tenant (or, at Landlord's election, apply the same to any balance of Rent next due and payable by Tenant under the Lease, as hereby amended).

15.Potential Reimbursement of Demising Work Costs and Tenant Commission Amount. If Tenant does not default beyond any applicable notice and cure periods under the Lease, as hereby amended, between the Effective Date and the last day of the twenty-fourth (24th) month of the Fourth Amendment Term (and does not assign the Lease, as hereby amended, to any third party that is not the Original Tenant), then Landlord shall reimburse Original Tenant for
(i) the total Demising Work Costs previously paid by Tenant to Landlord, and (ii) the leasing

commission actually paid by Tenant to Tenant's Broker in connection with this Fourth Amendment in the amount of $47,287.84. At Landlord's option, Landlord may deliver such amounts to Tenant by check, or apply such amounts as a credit against the Base Rent next due and payable by Tenant under the Lease, as hereby amended.

16.Reimbursement of Legal Fees by Tenant. Following the execution of this Fourth Amendment, within ten (10) days after Tenant's receipt of invoice therefor from Landlord, Tenant shall reimburse Landlord for all of Landlord's actual, out-of-pocket attorneys' fees incurred by Landlord in connection with the preparation and negotiation of this Fourth Amendment.

17.Confidentiality Breach. Tenant acknowledges that the terms of this Fourth Amendment, including, without limitation, Landlord's agreement to settle the Existing Dispute, conditionally waive the Conditionally Waived Pre-Reduction Base Rent Amount and defer Tenant's obligation to repay the Past Due Amount (and the terms of the repayment thereof) is confidential information. Tenant shall keep such information strictly confidential and shall not disclose such confidential information to any person or entity other than Tenant's employees, lenders, creditors, and legal and accounting consultants, or as otherwise required by law or court order (collectively, the "**Authorized Parties**"). If Tenant or any Authorized Parties disclose any such confidential information to anyone other than the Authorized Parties (herein, a "**Confidentiality Breach**"), then in addition to all of Landlord's other rights and remedies at law and/or in equity resulting from Confidentiality Breach, Landlord shall have all applicable rights set forth in Section 13 above due to the same being an Adverse Action.

18.Brokers. Landlord and Tenant each hereby represents and warrants to the other that it has had no dealings with any real estate broker or agent in connection with the negotiation of this Fourth Amendment, other than Jones Lang LaSalle, representing Tenant ("**Tenant's Broker**"), and that it knows of no other real estate broker or agent who is entitled to a commission in connection with this Fourth Amendment. Subject to Section 15 above, with respect to commissions in connection with this Fourth Amendment, Tenant shall be responsible for paying any commission to Tenant's Broker. Each party agrees to indemnify and defend the other party against and hold the other party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments and costs and expenses (including, without limitation, reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of the indemnifying party's dealings with any other real estate broker or agent in connection with this Fourth Amendment.

19.No Further Modification. Except as set forth in this Fourth Amendment, all of the terms and provisions of the Lease shall remain unmodified and in full force and effect.

20.Counterparts. This Fourth Amendment may be executed in multiple counterparts, each of which is to be deemed original for all purposes, but all of which together shall constitute one and the same instrument.

21.Electronic Signatures. Each of the parties to this Fourth Amendment (i) has agreed to permit the use from time to time, where appropriate, of telecopy or other electronic signatures (including, without limitation, DocuSign) in order to expedite the transaction contemplated by this Fourth Amendment, (ii) intends to be bound by its respective telecopy or other electronic

signature, (iii) is aware that the other will rely on such telecopied or other electronically transmitted signature, and (iv) acknowledges such reliance and waives any defenses to the enforcement of this Fourth Amendment and the documents affecting the transaction contemplated by this Fourth Amendment based on the fact that a signature was sent by telecopy or electronic transmission only.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

IN WITNESS WHEREOF, this Fourth Amendment has been executed as of the day and year first above written.

LANDLORD: RREF II PACIFIC CENTER LLC,
a Delaware limited liability company

By: Name: Jason Morrow

Its:

Authorized Signatory

TENANT: EMMAUS LIFE SCIENCES, INC.,
a Delaware corporation

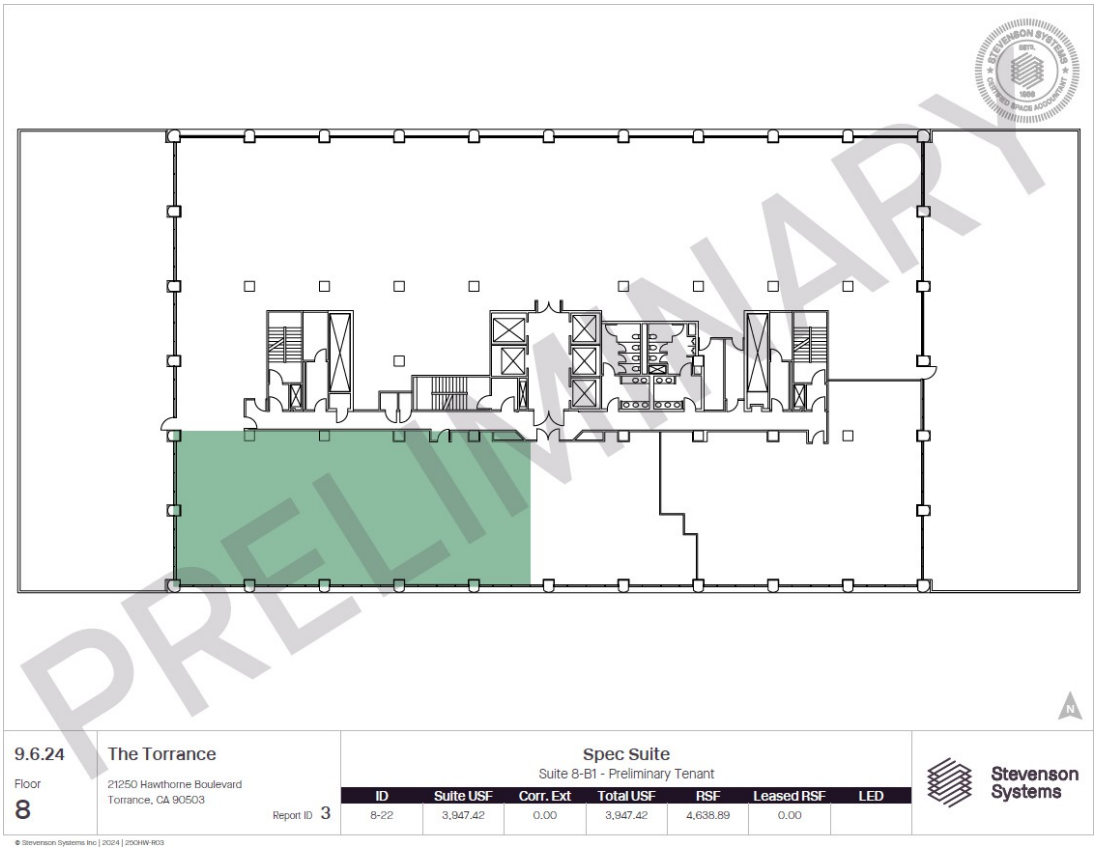
By: Name: Willis Lee

Its:

CEO

By: Name: Its:

EXHIBIT A
DEPICTION(S) OF REDUCTION PREMISES AND REMAINING PREMISES



9.6.24

Floor
8

The Torrance
21250 Hawthorne Boulevard
Torrance, CA 90503

Report ID 3

Spec Suite
Suite 8-B1 - Preliminary Tenant

ID	Suite USF	Corr. Ext	Total USF	RSF	Leased RSF	LED
8-22	3,947.42	0.00	3,947.42	4,638.89	0.00	

Stevenson Systems

EXHIBIT A

EXHIBIT B AMORTIZATION/REPAYMENT SCHEDULE

AR through 08.24	1,519,062.77	
Less: sec dep not repleni	(160,000.00)	
	1,359,062.77	
5 years = 60 months	60.00	
Per month	22,651.05	
Months of Fourth Amendment Term	Monthly Amortized Back Rent Amount	Annual Amortized Back Rent
1 - 12	22,651.05	271,812.60
13 - 24	22,651.05	271,812.60
25 - 36	22,651.05	271,812.60
37 - 48	22,651.05	271,812.60
49 - 60	22,651.05	271,812.60

4860-4104-6240.2
377146.00011/11-20-24/smf/smf

Agreement for the Purchase and Sale of Future Receipts

Seller's Legal Name: EMMAUS MEDICAL, INC.

D/B/A: EMMAUS MEDICAL

Form of Business Entity: [ ] Corporation; [ ] Limited Liability Company; [ ] Partnership; [ ] Limited Partnership; [ ] Limited Liability Partnership; [ ] Sole Proprietorship; [ ] Other:_____

Street Address: 21250 HAWTHORNE BLVD STE 800 **City:** TORRANCE **State:** CA **Zip:** 90503

Mailing Address: 251 LITTLE FALLS DRIVE **City:** WILMINGTON **State:** DE **Zip:** 19808

Primary Contact: _____ Title: _____ **Time in Business:** _____ **Federal Tax ID:** 06-1708146

Purchase Price: $1,000,000.00 **Purchased Amount:** $1,475,000.00

Average Projected Monthly Sales: $2,184,074.62

Specified Percentage: 15 % (Average Projected Monthly Sales x Specified Percentage / Average Business Days in a Calendar Month)

Initial Weekly **Amount:** **Please see Exhibit B**-4 **Origination Fee:** **$90,000.00** (to be deducted from the Purchase Price) **Payment will be withdrawn every** Monday

Account for the Deposit of All Future Receipts: Bank: CALIFORNIA BANK & TRUST

Account No: _____

Effective, December 02, 2024 Seller, identified above, hereby sells, assigns and transfers to AGILE CAPITAL FUNDING, LLC ("Buyer" or "Agile Capital Funding") located at 244 Madison Ave, Suite 168, New York, NY 10016 without recourse, the Specified Percentage of the proceeds of each future sale made by Seller (collectively "Future Receipts") until Seller has received the Purchased Amount. "Future Receipts" includes all payments made by cash, check, ACH or other electronic transfer, credit card, debit card, bank card, charge card (each such card shall be referred to herein as a "Payment Card") or other form of monetary payment in the ordinary course of Seller's business. As payment for the Purchased Amount, Buyer will deliver to Seller the Purchase Price, shown above, minus any Origination Fee shown above. Seller acknowledges that it has no right to repurchase the Purchased Amount from Buyer. Both parties agree that the obligation of Buyer under this Agreement will not be effective unless and until Buyer has completed its review of the Seller and has accepted this Agreement by delivering the Purchase Price, minus any Origination Fee. Prior to accepting this Agreement, Buyer may conduct a processing trial to confirm its access to the Account and the ability to withdraw the Initial Daily Amount If the processing trial is not completed to the satisfaction of Buyer, Buyer will refund to Seller all funds that were obtained by Buyer during the processing trial.

Agreement of Seller: By signing below Seller agrees to the terms and conditions contained in this Agreement, including those terms and conditions on the following pages, and further agrees that this transaction is for business purposes and not for personal, family, or household purposes.

Seller: EMMAUS MEDICAL, INC.

Agreed to by: /s/ Willis C. Lee (Signature), its Authorized Representative (Title)

Name: WILLIS C. LEE

Agreed to by: _____ (Signature), its Authorized Representative (Title)

Name: _____

Buyer: Agile Capital Funding

Agreed to by: /s/ Aaron Greenblott (Signature), its CFO (Title)

Agreement of Each Seller: Each Seller signing below agrees to the terms of the Credit Report Authorization below.

Seller: EMMAUS MEDICAL, INC.
Agreed to By: /s/ Willis C. Lee (Signature);

Name: WILLIS C. LEE Authorized Representative (Title)

1. Delivery of Purchased Amount: Seller must deposit all Future Receipts into the single business banking account specified above, which may not be used for any personal, family or household purposes (the "Account") and must instruct Seller's credit card processor, which must be approved by Buyer (the "Processor") to deposit all Payment Card receipts of Seller into the Account. Seller agrees not to change the Account or add an additional Account without the express written consent of Buyer. Seller authorizes Buyer to debit the Weekly Amount from the Account each business day by either ACH or electronic check. Seller will provide Buyer with all required access codes and agrees not to change them without prior written consent from Buyer. Seller will provide an appropriate ACH authorization to Buyer. Seller understands that it is responsible for either ensuring that the Weekly Amount is available in the Account each business day or advising Buyer prior to each weekly withdrawal of a shortage of funds. Otherwise, Seller will be responsible for any fees incurred by Buyer resulting from a rejected electronic check or ACH debit attempt, as set forth on Appendix A. Buyer is not responsible for any overdrafts or rejected transactions that may result from Buyer's debiting any amount authorized under the terms of this Agreement. Seller understands that the foregoing ACH authorization is a fundamental condition to induce Buyer to accept the Agreement. Consequently, such authorization is intended to be irrevocable.

2. Reconciliation and Changes to the Weekly Amount: The Initial Weekly Amount is intended to represent the Specified Percentage of Seller's weekly Future Receipts. For as long as no Event of Default has occurred, Buyer shall on or about the fifteenth day of each month reconcile the Seller's Account ("Account Reconciliation") by either crediting or further debiting the Seller's Account by the difference between the actual amount debited since the date of the last Account Reconciliation and the Specific Percentage of the actual Future Receipts collected by the Seller since the date of the last Account Reconciliation. Failure by Buyer to make an Account Reconciliation at any time for one or more months or portions thereof shall not be deemed as a breach of Buyer's obligation hereunder and each Account Reconciliation shall be made for the entire period of time since the date of the last Account Reconciliation. Buyer may, at Buyer's sole discretion as it deems appropriate and upon Seller's request, adjust the amount of the then- applicable Weekly Amount due under this Agreement in order to cause such Weekly Amount to more accurately reflect an amount which will reduce the need to credit Seller's account on a consistently recurring basis.

3. Weekly Amount Upon Default. Upon the occurrence of an Event of Default, the Weekly Amount shall equal 100% of all Future Receipts.

4. Sale of Future Receipts (THIS IS NOT A LOAN): Seller is selling a portion of a future revenue stream to Buyer at a discount, not borrowing money from Buyer. There is no interest rate or payment schedule and no time period during which the Purchased Amount must be collected by Buyer. If Future Receipts are remitted more slowly than Buyer may have anticipated or projected because Seller's business has slowed down, or if the full Purchased Amount is never remitted because Seller's business went bankrupt or otherwise ceased operations in the ordinary course of business, and Seller has not breached this Agreement, Seller would not owe anything to Buyer and would not be in breach of or default under this Agreement. Buyer is buying the Purchased Amount of Future Receipts knowing the risks that Seller's business may slow down or fail, and Buyer assumes these risks based on Seller's representations, warranties and covenants in this Agreement that are designed to give Buyer a reasonable and fair opportunity to receive the benefit of its bargain. By this Agreement, Seller transfers to Buyer full and complete ownership of the Purchased Amount of Future Receipts and Seller retains no legal or equitable interest therein. Seller agrees that it will treat Purchase Price and Purchased Amount in a manner consistent with a sale in its accounting records and tax returns. Seller agrees that Buyer is entitled to audit Seller's accounting records upon reasonable Notice in order to verify compliance. Seller waives any rights of privacy, confidentiality or tax payer privilege in any such litigation or arbitration in which Seller asserts that this transaction is anything other than a sale of future receipts.

5. Power of Attorney Seller irrevocably appoints Buyer as its agent and attorney-in-fact with full authority to take any action or execute any instrument or document to settle all obligations due to Buyer from Seller, or in the case of a violation by Seller of this Agreement or the occurrence of an Event of Default under Section 15 hereof by Seller, including without limitation (i) to obtain and adjust insurance;(ii) to collect monies due or to become due under or in respect of any of the Future Receipts; (iii) to receive, endorse and collect any checks, notes, drafts, instruments, documents or chattel paper in connection with clause (i) or clause (ii) above; (iv) to sign Seller's name on any invoice, bill of lading, or assignment directing customers or account debtors to direct payables to Buyer; (v) to file any claims or take any action or institute any proceeding which Buyer may deem necessary for the collection of any of the remaining Purchased Amount of the Future Receipts, or otherwise to enforce its rights with respect to delivery of the Purchased Amount; and/or (vi) to contact any Processor of Seller and to direct such Processor(s) to deliver directly to Buyer all or any portion of the amounts received by such Processor(s) and to provide any information regarding Seller requested by Buyer. Each Processor may rely on the previous sentence as written authorization of Seller to provide any information requested by Buyer. Each Processor is hereby irrevocably authorized and directed by Seller to follow any instruction of Buyer without inquiry as to Buyer's right or authority to give such instructions. Seller acknowledges the terms of the preceding sentence and agrees not to (a) interfere with Buyer's instructions or a Processor's compliance with this Agreement or (b) request any modification thereto without Buyer's prior written consent. Notwithstanding anything to the contrary herein, the power of attorney shall only be effected thirty (30) days after an Event of Default under this Agreement.

6. Fees and Charges: Other than the Origination Fee, if any, set forth above, Buyer is NOT CHARGING ANY ORIGINATION OR BROKER FEES to Seller. If Seller is charged another such fee, it is not being charged by Buyer. A list of all fees and charges applicable under this Agreement is contained in Appendix A.

7. Credit Report and Other Authorizations: Seller and each of the Owners signing above authorize Buyer, its agents and representatives and any credit reporting agency engaged by Buyer, to (i) investigate any references given or any other statements or data obtained from or about Seller or any of its Owners for the purpose of this Agreement, (ii) obtain consumer and business credit reports on the Seller and any of its Owners, and (iii) to contact personal and business references provided by the Seller in the Application, at any time now or for so long as Seller and/or Owners continue to have any obligation owed to Buyer as a consequence of this Agreement or for Buyer's ability to determine Seller's eligibility to enter into any future agreement with Buyer.

8. Authorization to Contact Current and Prior Banks: Seller hereby authorizes Buyer to contact any current or prior bank of the Seller in order to obtain whatever information it may require regarding Seller's transactions with any such bank. Such information may include but is not limited to, information necessary to verify the amount of Future Receipts previously processed on behalf of Seller and any fees that may have been charged by the bank. In addition, Seller authorizes Buyer to contact any current or prior bank of the Seller for collections and in order to confirm that Seller is exclusively using the Account identified above, or any other account approved by Buyer, for the deposit of all business receipts.

9. Financial Information. Seller authorizes Buyer and its agents to investigate its financial responsibility and history, and will provide to Buyer any authorizations, bank or financial statements, tax returns, etc., as Buyer deems necessary in its sole discretion prior to or at any time after execution of this Agreement. A photocopy of this authorization will be deemed acceptable as an authorization for release of financial and credit information. Buyer is authorized to update such information and financial and credit profiles from time to time as it deems appropriate. Seller waives, to the maximum extent permitted by law, any claim for damages against Buyer or any of its affiliates relating to any investigation undertaken by or on behalf of Buyer as permitted by this Agreement or disclosure of information as permitted by this Agreement.

10. Transactional History. Seller authorizes all of its banks and brokers and Payment Card processors to provide Buyer with Seller's banking, brokerage and/or processing history to determine qualification or continuation in this program, or for collections upon an Event of Default.

11. Publicity. Seller hereby authorizes Buyer to use its name in listings of clients and in advertising and marketing materials.

12. Application of Amounts Received by Buyer. Buyer reserves the right to apply amounts received by it under this Agreement to any fees or other charges due to Buyer from Seller prior to applying such amounts to reduce the amount of any outstanding Purchased Amount.

13. Representations, Warranties and Covenants of Seller:

13.1 **Good Faith, Best Efforts and Due Diligence.** Seller will conduct its business in good faith and will use its best efforts to continue its business at least at its current level, to ensure that Buyer obtains the Purchased Amount.

13.2 **Stacking Prohibited.** Seller shall not enter into any Seller cash advance or any loan agreement that relates to or involves its Future Receipts with any party other than Buyer for the duration of this Agreement. Buyer may share information regarding this Agreement with any third party in order to determine whether Seller is in compliance with this provision.

13.3 **Financial Condition and Financial Information.** Any bank statements and financial statements of Seller that have been furnished to Buyer, and future statements that will be furnished to Buyer, fairly represent the financial condition of Seller at such dates, and Seller will notify Buyer immediately if there are material adverse changes, financial or otherwise, in the condition or operation of Seller or any change in the ownership of Seller. Buyer may request statements at any time during the performance of this Agreement and the Seller shall provide them to Buyer within five business days. Furthermore, Seller represents that all documents, forms and recorded interviews provided to or with Buyer are true, accurate and complete in all respects, and accurately reflect Seller's financial condition and results of operations. Seller further agrees to authorize the release of any past or future tax returns to Seller.

13.4 **Governmental Approvals.** Seller is in compliance and shall comply with all laws and has valid permits, authorizations and licenses to own, operate and lease its properties and to conduct the business in which it is presently engaged and/or will engage in hereafter.

13.5. **Authority to Enter Into This Agreement.** Seller and the person(s) signing this Agreement on behalf of Seller, have full power and authority to incur and perform the obligations under this Agreement, all of which have been duly authorized.

13.6. **Change of Name or Location or Sale or Closing of Business.** Seller will not conduct Seller's businesses under any name other than as disclosed to Buyer or change any of its places of business without prior written consent of Buyer. Seller will not sell, dispose, transfer or otherwise convey all or substantially all of its business or assets without (i) the express prior written consent of Buyer, and (ii) the written agreement of any purchaser or transferee assuming all of Seller's obligations under this Agreement pursuant to documentation satisfactory to Buyer. Except as disclosed to Buyer in writing, Seller has no current plans to close its business either temporarily, whether for renovations, repairs or any other purpose, or permanently. Seller agrees that until Buyer has received all of the Purchased Amount Seller will not voluntarily close its business on a temporarily basis for renovations, repairs, or any other purposes. This provision, however, does not prohibit Seller from closing its business temporarily if such closing is required to conduct renovations or repairs that are required by local ordinance or other legal order, such as from a health or fire inspector, or if otherwise forced to do so by circumstances outside of the control of Seller. Prior to any such closure, Seller will provide Buyer ten business days' notice to the extent practicable.

13.7. **No Pending or Contemplated Bankruptcy.** As of the date Seller executes this Agreement, Seller is not insolvent and does not contemplate and has not filed any petition for bankruptcy protection under Title 11 of the United States Code and there has been no involuntary petition brought or pending against Seller. Seller represents that it has not consulted with a bankruptcy attorney within six months prior to the date of this Agreement. Seller further warrants that it does not anticipate filing a bankruptcy petition and it does not anticipate that an involuntary petition will be filed against it.

13.8. **Seller to Maintain Insurance.** Seller will possess and maintain insurance in such amounts and against such risks as are necessary to protect its business and will provide proof of such insurance to Buyer upon demand.

13.9. **Seller to Pay Taxes Promptly.** Seller will promptly pay all necessary taxes, including but not limited to employment and sales and use taxes.

13.10. **No Violation of Prior Agreements.** Seller's execution and performance of this Agreement will not conflict with any other agreement, obligation, promise, court order, administrative order or decree, law or regulation to which Seller is subject, including any agreement the prohibits the sale or pledge of Seller's future receipts.

13.11. **No Diversion of Receipts.** Seller will not permit any event to occur that could cause a diversion of any of Seller's Future Receipts from the Account to any other entity.

13.12. **Seller's Knowledge and Representation.** Seller represents warrants and agrees that it is a sophisticated business entity familiar with the kind of transaction covered by the Agreement; it was represented by counsel or had full opportunity to consult with counsel.

14. Rights of Buyer:

14.1 **Financing Statements Financing Statements and Security Interest.** Following the occurrence of an Event of Default, Seller grants Buyer a security interest in all of Seller's present and future accounts receivable in an amount not to exceed the Purchased Amount, and in the Event of Default, not to exceed the Purchased Amount and all fees and cost contemplated under this Agreement, wherever located, and related proceeds now or hereafter owned or acquired by Seller.

Seller authorizes Buyer to file one or more UCC-1 forms consistent with the Uniform Commercial Code ("UCC") in order to give notice of this security interest and that the Purchased Amount of Future Receipts is the sole property of Buyer. The UCC filing may state that such sale is intended to be a sale and not an assignment for security and may state that the Seller is prohibited from obtaining any financing that impairs the value of the Future Receipts or Buyer's right to collect same. Seller authorizes Buyer to debit

14.2 **Right of Access.** In order to ensure that Seller is complying with the terms of this Agreement, Buyer shall have the right to (i) enter, without notice, the premises of Seller's business for the purpose of inspecting and checking Seller's transaction processing terminals to ensure the terminals are properly programmed to submit and or batch Seller's weekly receipts to the Processor and to ensure that Seller has not violated any other provision of this Agreement, and (ii) Seller shall provide access to its employees and records and all other items as requested by Buyer, and (iii) have Seller provide information about its business operations, banking relationships, vendors, landlord and other information to allow Buyer to interview any relevant parties.

14.3 **Phone Recordings and Contact.** Seller agrees that any call between Buyer and Seller, and their agents and employees may be recorded or monitored. Further, Seller agrees that (i) it has an established business relationship with Buyer, its employees and agents and that Seller may be contacted from time-to-time regarding this or other business transactions; (ii) that such communications and contacts are not unsolicited or inconvenient; and (iii) that any such contact may be made at any phone number, emails address, or facsimile number given to Buyer by the Seller, its agents or employees, including cellular telephones.

15. Events of Default. The occurrence of any of the following events shall constitute an "Event of Default": (a) Seller interferes with Buyer's right to collect the Weekly Amount; (b) Seller violates any term of covenant in this Agreement; (c) Seller uses multiple depositary accounts without the prior written consent of Buyer; (d) Seller changes its depositing account or its payment card processor without the prior written consent of Buyer; (e) Seller defaults under any of the terms, covenants and conditions of any other agreement with Buyer; or (f) Seller fails to provide timely notice to Buyer such that (i) where Seller is on a daily payment plan, two or more ACH transactions attempted by Buyer within one calendar month are rejected by Seller's bank, or (ii) where Seller is on a weekly payment plan, one or more ACH transaction attempted by Buyer is rejected by Seller's bank at any given time that such payment under the payment plan is due.

16. Remedies. If any Event of Default occurs, Buyer may proceed to protect and enforce its rights including, but not limited to, the following:

16.1. The Specified Percentage shall equal 100%. The full uncollected Purchased Amount plus all fees and charges (including legal fees) due under this Agreement will become due and payable in full immediately.

16.2. Buyer may enforce the provisions of the Guaranty of Performance against the guarantor. Notwithstanding anything to the contrary herein, in the event that Seller receives funds, from its clients or customers or any entity holding its receivables or otherwise (collectively, the "A/C Holder"), for which the applicable A/C Holder for any reason is or may be responsible to make payment to Seller, then the Seller, agrees to make prompt payment of such funds to Buyer or to reimburse A/C Holder therefore in the event the A/C Holder has made such payment to their detriment, and Seller hereby guarantees to Buyer the prompt payment of such funds by Seller and further hereby indemnifies Buyer and any applicable A/C Holder from and against any and all loss, cost or expense in connection therewith.

16.3. Buyer may proceed to protect and enforce its rights and remedies by arbitration or lawsuit. In any such arbitration or lawsuit, under which Buyer shall recover Judgment against Seller, Seller shall be liable for all of Buyer's costs of the lawsuit, including but not limited to all reasonable attorneys' fees and court costs. However, the rights of Buyer under this provision shall be limited as provided in the arbitration provision set forth below.

16.4. [Intentionally Omitted]

16.5. Buyer may debit Seller's depository accounts wherever situated by means of ACH debit or facsimile signature on a computer- generated check drawn on Seller's bank account or otherwise for all sums due to Buyer

16.6. Seller shall pay to Buyer all reasonable costs associated with the Event of Default and the enforcement of Buyer's remedies, including but not limited to court costs and attorneys' fees

16.7. Buyer may exercise and enforce its rights as a secured party under the UCC.

16.8. All rights, powers and remedies of Buyer in connection with this Agreement may be exercised at any time by Buyer after the occurrence of an Event of Default, are cumulative and not exclusive, and shall be in addition to any other rights, powers or remedies provided by law or equity.

17. Modifications; Agreements. No modification, amendment, waiver or consent of any provision of this Agreement shall be effective unless the same shall be in writing and signed by Buyer

18. Assignment. Buyer may assign, transfer or sell its rights to receive the Purchased Amount or delegate its duties hereunder, either in whole or in part, with or without prior written notice to Seller.

19. Notices.

19.1. Notices from Buyer to Seller. Buyer may send any notices, disclosures, terms and conditions, other documents, and any future changes to Seller by regular mail or by e-mail, at Buyer's option and Seller consents to such electronic delivery. Notices sent by e-mail are effective when sent. Notices sent by regular mail become effective upon mailing to Seller's address set forth in this Agreement.

19.2. Notices from Seller to Buyer. Seller may send any notices to Buyer by e-mail only upon the prior written consent of Buyer, which consent may be withheld or revoked at any time in Buyer's sole discretion. Otherwise, any notices or other communications from Seller to Buyer must be delivered by certified mail, return receipt requested, to Buyer's address set forth in this Agreement. Notices sent to Buyer shall become effective only upon receipt by Buyer.

20. Binding Effect; Governing Law, Venue and Jurisdiction. This Agreement shall be binding upon and inure to the benefit of Seller, Buyer and their respective successors and assigns, except that Seller shall not have the right to assign its rights hereunder or any interest herein without the prior written consent of Buyer which consent may be withheld in Buyer's sole discretion. This Agreement shall be governed by and construed in accordance with the laws of the state of New York, without regards to any applicable principals of conflicts of law. Any suit, action or proceeding arising hereunder, or the interpretation, performance or breach of this Agreement, shall, if Buyer so elects, be instituted in any court sitting in New York, (the "Acceptable Forums"). Seller agrees that the Acceptable Forums are convenient to it, and submits to the jurisdiction of the Acceptable Forums and waives any and all objections to jurisdiction or venue. Should such proceeding be initiated in any other forum, Seller waives any right to oppose any motion or application made by Buyer to transfer such proceeding to an Acceptable Forum.

21. Survival of Representation, etc. All representations, warranties and covenants herein shall survive the execution and delivery of this Agreement and shall continue in full force until all obligations under this Agreement shall have been satisfied in full.

22. Interpretation. All Parties hereto have reviewed this Agreement with an attorney of their own choosing and have relied only on their own attorney's guidance and advice. No construction determinations shall be made against either Party hereto as drafter.

23. Entire Agreement and Severability. This Agreement embodies the entire agreement between Seller and Buyer and supersedes all prior agreements and understandings relating to the subject matter hereof. In case any of the provisions in this Agreement is found to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of any other provision contained herein shall not in any way be affected or impaired.

24. Facsimile Acceptance. Facsimile signatures hereon, or other electronic means reflecting the party's signature hereto, shall be deemed acceptable for all purposes.

25. Confidentiality: The terms and conditions of this Agreement are proprietary and confidential unless required by law. Seller shall not disclose this information to anyone other than its attorney, accountant or similar service provider and then only to the extent such person uses the information solely for purpose of advising Seller and first agrees in writing to be bound by the terms of this Section. A breach entitles Buyer to damages and legal fees as well as temporary restraining order and preliminary injunction without bond.

26. Monitoring, Recording, and Solicitations.

26.1. **Authorization to Contact Seller by Phone.** Seller authorizes Buyer, its affiliates, agents and independent contractors to contact Seller at any telephone number Seller provides to Buyer or from which Seller places a call to Buyer, or any telephone number where Buyer believes it may reach Seller, using any means of communication, including but not limited to calls or text messages to mobile, cellular, wireless or similar devices or calls or text messages using an automated telephone dialing system and/or artificial voices or prerecorded messages, even if Seller incurs charges for receiving such communications

26.2. **Authorization to Contact Seller by Other Means.** Seller also agree that Buyer, its affiliates, agents and independent contractors, may use any other medium not prohibited by law including, but not limited to, mail, e-mail and facsimile, to contact Seller. Seller expressly consents to conduct business by electronic means.

27. <u>JURY WAIVER.</u> THE PARTIES WAIVE THE RIGHT TO A TRIAL BY JURY IN ANY COURT IN ANY SUIT, ACTION OR PROCEEDING ON ANY MATTER ARISING IN CONNECTION WITH OR IN ANY WAY RELATED TO THE TRANSACTIONS OF WHICH THIS AGREEMENT IS A PART OR ITS ENFORCEMENT, EXCEPT WHERE SUCH WAIVER IS PROHIBITED BY LAW OR DEEMED BY A COURT OF LAW TO BE AGAINST PUBLIC POLICY. THE PARTIES ACKNOWLEDGE THAT EACH MAKES THIS WAIVER KNOWINGLY, WILLINGLY AND VOLUNTARILY AND WITHOUT DURESS, AND ONLY AFTER EXTENSIVE CONSIDERATION OF THE RAMIFICATIONS OF THIS WAIVER WITH THEIR ATTORNEYS.

28. CLASS ACTION WAIVER. THE PARTIES WAIVE ANY RIGHT TO ASSERT ANY CLAIMS AGAINST THE OTHER PARTY AS A REPRESENTATIVE OR MEMBER IN ANY CLASS OR REPRESENTATIVE ACTION, EXCEPT WHERE SUCH WAIVER IS PROHIBITED BY LAW OR DEEMED BY A COURT OF LAW TO BE AGAINST PUBLIC POLICY. TO THE EXTENT EITHER PARTY IS PERMITTED BY LAW OR COURT OF LAW TO PROCEED WITH A CLASS OR REPRESENTATIVE ACTION AGAINST THE OTHER, THE PARTIES AGREE THAT: (I) THE PREVAILING PARTY SHALL NOT BE ENTITLED TO RECOVER ATTORNEYS' FEES OR COSTS ASSOCIATED WITH PURSUING THE CLASS OR REPRESENTATIVE ACTION (NOT WITHSTANDING ANY OTHER PROVISION IN THIS AGREEMENT); AND (II) THE PARTY WHO INITIATES OR PARTICIPATES AS A MEMBER OF THE CLASS WILL NOT SUBMIT A CLAIM OR OTHERWISE PARTICIPATE IN ANY RECOVERY SECURED THROUGH THE CLASS OR REPRESENTATIVE ACTION.

29. ARBITRATION. IF BUYER, SELLER OR ANY GUARANTOR REQUESTS, THE OTHER PARTIES AGREE TO ARBITRATE ALL DISPUTES AND CLAIMS ARISING OUT OF OR RELATING TO THIS AGREEMENT. IF BUYER, SELLER OR ANY GUARANTOR SEEKS TO HAVE A DISPUTE SETTLED BY ARBITRATION, THAT PARTY MUST FIRST SEND TO ALL OTHER PARTIES, BY CERTIFIED MAIL, A WRITTEN NOTICE OF INTENT TO ARBITRATE. IF BUYER, SELLER OR ANY GUARANTOR DO NOT REACH AN AGREEMENT TO RESOLVE THE CLAIM WITHIN 30 DAYS AFTER THE NOTICE IS RECEIVED, BUYER, SELLER OR ANY GUARANTOR MAY COMMENCE AN ARBITRATION PROCEEDING WITH THE AMERICAN ARBITRATION ASSOCIATION ("AAA") OR NATIONAL ARBITRATION FORUM ("NAF"). BUYER WILL PROMPTLY REIMBURSE SELLER OR THE GUARANTOR ANY ARBITRATION FILING FEE, HOWEVER, IN THE EVENT THAT BOTH SELLER AND THE GUARANTOR MUST PAY FILING FEES, BUYER WILL ONLY REIMBURSE SELLER'S ARBITRATION FILING FEE AND, EXCEPT AS PROVIDED IN THE NEXT SENTENCE, BUYER WILL PAY ALL ADMINISTRATION AND ARBITRATOR FEES. IF THE ARBITRATOR FINDS THAT EITHER THE SUBSTANCE OF THE CLAIM RAISED BY SELLER OR THE GUARANTOR OR THE RELIEF SOUGHT BY SELLER OR THE GUARANTOR IS IMPROPER OR NOT WARRANTED, AS MEASURED BY THE STANDARDS SET FORTH IN FEDERAL RULE OF PROCEDURE 11(B), THEN BUYER WILL PAY THESE FEES ONLY IF REQUIRED BY THE AAA OR NAF RULES. SELLER AND THE GUARANTOR AGREE THAT, BY ENTERING INTO THIS AGREEMENT, THEY ARE WAIVING THE RIGHT TO TRIAL BY JURY. BUYER, SELLER OR ANY GUARANTOR MAY BRING CLAIMS AGAINST ANY OTHER PARTY ONLY IN THEIR INDIVIDUAL CAPACITY, AND NOT AS A PLAINTIFF OR CLASS MEMBER IN ANY PURPORTED CLASS OR REPRESENTATIVE PROCEEDING. FURTHER, BUYER, SELLER AND ANY GUARANTOR AGREE THAT THE ARBITRATOR MAY NOT CONSOLIDATE PROCEEDINGS FOR MORE THAN ONE PERSON'S CLAIMS, AND MAY NOT OTHERWISE PRESIDE OVER ANY FORM OF A REPRESENTATIVE OR CLASS PROCEEDING, AND THAT IF THIS SPECIFIC PROVISION IS FOUND UNENFORCEABLE, THEN THE ENTIRETY OF THIS ARBITRATION CLAUSE SHALL BE NULL AND VOID.

30. RIGHT TO OPT OUT OF ARBITRATION. SELLER AND GUARANTOR(S) MAY OPT OUT OF THIS CLAUSE. TO OPT OUT OF THIS ARBITRATION CLAUSE, SELLER AND EACH GUARANTOR MUST SEND BUYER A NOTICE THAT THE SELLER AND EACH GUARANTOR DOES NOT WANT THIS CLAUSE TO APPLY TO THIS AGREEMENT. FOR ANY OPT OUT TO BE EFFECTIVE, SELLER AND EACH GUARANTOR MUST SEND AN OPT OUT NOTICE TO THE FOLLOWING ADDRESS BY REGISTERED MAIL, WITHIN 14 DAYS AFTER THE DATE OF THIS AGREEMENT: BUYER – ARBITRATION OPT OUT, Agile Capital Funding, 244 Madison Ave, Suite 168, New York, NY 10016, ATTENTION: LEGAL DEPARTMENT.

31. SERVICE OF PROCESS. IN ADDITION TO THE METHODS OF SERVICE ALLOWED BY THE NEW YORK STATE CIVIL PRACTICE LAW & RULES ("CPLR"), SELLER HEREBY CONSENTS TO SERVICE OF PROCESS UPON IT BY REGISTERED OR CERTIFIED MAIL, RETURN RECEIPT REQUESTED, SERVICE HEREUNDER SHALL BE COMPLETE UPON SELLER'S ACTUAL RECEIPT OF PROCESS OR UPON BUYER'S RECEIPT OF THE RETURN THEREOF BY THE UNITED STATES POSTAL SERVICE AS REFUSED OR UNDELIVERABLE. SELLER MUST PROMPTLY NOTIFY BUYER, IN WRITING, OF EACH AND EVERY CHANGE OF ADDRESS TO WHICH SERVICE OF PROCESS CAN BE MADE. SERVICE BY BUYER TO THE LAST KNOWN ADDRESS SHALL BE SUFFICIENT. SELLER WILL HAVE (30) CALENDAR DAYS AFTER SERVICE HEREUNDER IS COMPLETE IN WHICH TO RESPOND. FURTHERMORE, SELLER EXPRESSLY CONSENTS THAT ANY AND ALL NOTICE(S), DEMAND(S), REQUEST(S) OR OTHER COMMUNICATION(S) UNDER AND PURSUANT TO THIS AGREEMENT FOR THE PURCHASE AND SALE OF FUTURE RECEIVABLES SHALL BE DELIVERED IN ACCORDANCE WITH THE PROVISIONS OF THIS AGREEMENT FOR THE PURCHASE AND SALE OF FUTURE RECEIVABLES.

32. FEE STRUCTURE.

- **a. NSF: $75.00**
- **b. ACH REJECTION: $100.00**
- **c. BANK CHANGE: $50.00**
- **d. BLOCKED ACCOUNT: $2,500.00**
- **e. DEFAULT: $5,000.00**

EMMAUS MEDICAL, INC.

Seller: _____

Agreed to by: /s/ Willis C. Lee (Signature)

Name: WILLIS C. LEE

Title: Authorized Representative

EMMAUS MEDICAL, INC.

Guarantor: _____

Agreed to by: /s/ Willis C. Lee (Signature)

Name: WILLIS C. LEE

Title: Authorized Representative

GUARANTY OF PERFORMANCE

This Guaranty of Performance (this "Guaranty") is executed as of December 02, 2024, by

EMMAUS MEDICAL, INC. (the "Guarantor"), for the benefit of Agile

Capital Funding ("Buyer") ("Buyer").

Capitalized terms used herein, but not defined, shall have the meanings assigned to them in the Purchase Agreement (as hereinafter defined).

RECITALS

A. Pursuant to that Agreement for the Purchase and Sale of Future Receipts (the "Purchase Agreement"), dated of even date herewith, between Buyer and EMMAUS MEDICAL, INC seller"), Buyer has purchased Future Receipts of Seller.

B. Buyer is not willing to enter into the Purchase Agreement unless Guarantor irrevocably, absolutely, and unconditionally guarantees prompt and complete performance to Buyer of all of the obligations of Seller; and

C. Guarantor will directly benefit from Buyer and Seller entering into the Purchase Agreement.

AGREEMENT

As an inducement to Buyer to purchase the Future Receipts identified in the Purchase Agreement, and for other good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, Guarantor does hereby agree as follows:

1. Defined Terms: All capitalized terms used and not otherwise defined herein shall have the meanings assigned to such terms in the Purchase Agreement.

2. Guaranty of Obligations: Guarantor hereby irrevocably, absolutely and unconditionally guarantees to Buyer prompt and complete performance of all of Seller's obligations under the Purchase Agreement

3. Guarantor's Other Agreements: Guarantor will not dispose, convey, sell or otherwise transfer, or cause Seller to dispose, convey, sell or otherwise transfer, any material business assets of Seller without the prior written consent of Buyer, which may be withheld for any reason, until receipt of the entire Purchased Amount. Guarantor hereby agrees to pay all costs and attorney's fees incurred by Buyer in connection with any actions commenced by Buyer to enforce its rights or incurred in any action to defend its performance under the Purchase Agreement and this Guaranty. This Guaranty is binding upon Guarantor, and Guarantor's heirs, legal representatives, successors and assigns. If there is more than one Guarantor, the obligations of the Guarantors hereunder shall be joint and several. The obligation of Guarantor shall be unconditional and absolute, regardless of the unenforceability of any provision of any agreement between Seller and Buyer, or the existence of any defense, setoff or counterclaim which Seller may assert. Buyer is hereby authorized, without notice or demand and without affecting the liability of Guarantor hereunder, to at any time renew or extend Seller's obligations under the Purchase Agreement or otherwise modify, amend or change the terms of the Purchase Agreement. Guarantor is hereby notified that a negative credit report reflecting on his/her credit record may be submitted to a credit reporting agency if the terms of this Guaranty are not honored by the Guarantor.

4. Waiver; Remedies: No failure on the part of Buyer to exercise, and no delay in exercising, any right under this warranty shall operate as a waiver, nor shall any single or partial exercise of any right under this Guaranty preclude any other or further exercise of any other right. The remedies provided in this guaranty are cumulative and not exclusive of any remedies provided by law or eq uity. In the event that Seller fails to perform any obligation under the Purchase Agreement, Buyer may enforce its rights under this guaranty without first seeking to obtain performance for such default from Seller or any other guarantor.

5. Acknowledgment of Purchase: Guarantor acknowledges and agrees that the Purchase Price paid by Buyer to Seller in exchange for the Purchased Amount is a purchase of the Purchased Amount and is not intended to be treated as a loan or financial accommodation from Buyer to Seller. Guarantor specifically acknowledges Buyer is not a lender, bank or credit card processor, and that Buyer has not offered any loans to Seller, and Guarantor waives any claims or defenses of usury in any action arising out of this guaranty. Guarantor acknowledges the Purchase Price paid to Seller is good and valuable consideration for the sale of the Purchased Amount of Future Receipts.

6. Governing Law and Jurisdiction: This guaranty shall be governed by, and constructed in accordance with, the internal laws of the State of New York without regard to principles of conflicts of law. Except as provided in Section o f this guaranty, guarantor submits to the exclusive jurisdiction and venue of the state or federal courts having jurisdiction over any city/county in the State of New York of any claims or actions arising, directly or indirectly, out of or related to this guaranty. The parties stipulate that the venues referenced in this Agreement are convenient. The parties further agree that the mailing by certified or registered mail, return receipt requested, of any process reuired by any such court will constitute valid and lawful service of process against them, without the necessity for service by any other means provided by statute or rule of court, but without invalidating service performed in accordance with such other provisions

7. JURY WAIVER: THE PARTIES WAIVE THE RIGHT TO A TRIAL BY JURY IN ANY COURT IN ANY SUIT, ACTION OR PROCEEDING ON ANY MATTER ARISING IN CONNECTION WITH OR IN ANY WAY RELATED TO THE TRANSACTIONS OF WHICH THIS AGREEMENT IS A PART OR ITS ENFORCEMENT, EXCEPT WHERE SUCH WAIVER IS PROHIBITED BY LAW OR DEEMED BY A COURT OF LAW TO BE AGAINST PUBLIC POLICY. THE PARTIES ACKNOWLEDGE THAT EACH MAKES THIS WAIVER KNOWINGLY, WILLINGLY AND VOLUNTARILY AND WITHOUT DURESS, AND ONLY AFTER EXTENSIVE CONSIDERATION OF THE RAMIFICATIONS OF THIS WAIVER WITH THEIR ATTORNEYS.

8. CLASS ACTION WAIVER: THE PARTIES WAIVE ANY RIGHT TO ASSERT ANY CLAIMS AGAINST THE OTHER PARTY AS A REPRESENTATIVE OR MEMBER IN ANY CLASS OR REPRESENTATIVE ACTION, EXCEPT WHERE SUCH WAIVER IS PROHIBITED BY LAW OR DEEMED BY A COURT OF LAW TO BE AGAINST PUBLIC POLICY. TO THE EXTENT EITHER PARTY IS PERMITTED BY LAW OR COURT OF LAW TO PROCEED WITH A CLASS OR REPRESENTATIVE ACTION AGAINST THE OTHER, THE PARTIES AGREE THAT: (I) THE PREVAILING PARTY SHALL NOT BE ENTITLED TO RECOVER ATTORNEYS' FEES OR COSTS ASSOCIATED WITH PURSUING THE CLASS OR REPRESENTATIVE ACTION (NOT WITHSTANDING ANY OTHER PROVISION IN THIS AGREEMENT); AND (II) THE PARTY WHO INITIATES OR PARTICIPATES AS A MEMBER OF THE CLASS WILL NOT SUBMIT A CLAIM OR OTHERWISE PARTICIPATE IN ANY RECOVERY SECURED THROUGH THE CLASS OR REPRESENTATIVE ACTION.

9. ARBITRATION: IF BUYER, SELLER OR ANY GUARANTOR REQUESTS, THE OTHER PARTIES AGREE TO ARBITRATE ALL DISPUTES AND CLAIMS ARISING OUT OF OR RELATING TO THIS AGREEMENT. IF BUYER, SELLER OR ANY GUARANTOR SEEKS TO HAVE A DISPUTE SETTLED BY ARBITRATION, THAT PARTY MUST FIRST SEND TO THE OTHER PARTY, BY CERTIFIED MAIL, A WRITTEN NOTICE OF INTENT TO ARBITRATE. IF BUYER, SELLER OR ANY GUARANTOR DO NOT REACH AN AGREEMENT TO RESOLVE THE CLAIM WITHIN 30 DAYS AFTER THE NOTICE IS RECEIVED, BUYER, SELLER OR ANY GUARANTOR MAY COMMENCE AN ARBITRATION PROCEEDING WITH THE AMERICAN ARBITRATION ASSOCIATION ("AAA") OR NATIONAL ARBITRATION FORUM ("NAF"). BUYER WILL PROMPTLY

REIMBURSE SELLER OR THE GUARANTOR ANY ARBITRATION FILING FEE, HOWEVER, IN THE EVENT THAT BOTH SELLER AND THE GUARANTOR MUST PAY FILING FEES, BUYER WILL ONLY REIMBURSE SELLER'S ARBITRATION FILING FEE AND, EXCEPT AS PROVIDED IN THE NEXT SENTENCE, BUYER WILL PAY ALL ADMINISTRATION AND ARBITRATOR FEES. IF THE ARBITRATOR FINDS THAT EITHER THE SUBSTANCE OF THE CLAIM RAISED BY SELLER OR THE GUARANTOR OR THE RELIEF SOUGHT BY SELLER OR THE GUARANTOR IS IMPROPER OR NOT WARRANTED, AS MEASURED BY THE STANDARDS SET FORTH IN FEDERAL RULE OF PROCEDURE 11(B), THEN BUYER WILL PAY THESE FEES ONLY IF REQUIRED BY THE AAA OR NAF RULES. SELLER AND THE GUARANTOR AGREE THAT, BY ENTERING INTO THIS AGREEMENT, THEY ARE WAIVING THE RIGHT TO TRIAL BY JURY. BUYER, SELLER OR ANY GUARANTOR MAY BRING CLAIMS AGAINST ANY OTHER PARTY ONLY IN THEIR INDIVIDUAL CAPACITY, AND NOT AS A PLAINTIFF OR CLASS MEMBER IN ANY PURPORTED CLASS OR REPRESENTATIVE PROCEEDING. FURTHER, BUYER, SELLER AND ANY GUARANTOR AGREE THAT THE ARBITRATOR MAY NOT CONSOLIDATE PROCEEDINGS FOR MORE THAN ONE PERSON'S CLAIMS,AND MAY NOT OTHERWISE PRESIDE OVER ANY FORM OF A REPRESENTATIVE OR CLASS PROCEEDING, AND THAT IF THIS SPECIFIC PROVISION IS FOUND UNENFORCEABLE, THEN THE ENTIRETY OF THIS ARBITRATION CLAUSE SHALL BE NULL AND VOID.

10. RIGHT TO OPT OUT OF ARBITRATION: SELLER AND GUARANTOR(S) MAY OPT OUT OF THIS CLAUSE. TO OPT OUT OF THIS ARBITRATION CLAUSE, SELLER AND EACH GUARANTOR MUST SEND BUYER A NOTICE THAT THE SELLER AND EACH GUARANTOR DOES NOT WANT THIS CLAUSE TO APPLY TO THIS AGREEMENT. FOR ANY OPT OUT TO BE EFFECTIVE, SELLER AND EACH GUARANTOR MUST SEND AN OPT OUT NOTICE TO THE FOLLOWING ADDRESS BY REGISTERED MAIL, WITHIN 14 DAYS AFTER THE DATE OF THIS AGREEMENT: BUYER – ARBITRATION OPT OUT,
Agile Capital Funding 244 Madison Ave, Suite 168, New York, NY 10016 ,

ATTENTION: LEGAL DEPARTMENT.

11. SERVICE OF PROCESS. IN ADDITION TO THE METHODS OF SERVICE ALLOWED BY THE NEW YORK STATE CIVIL PRACTICE LAW & RULES (•••CPLR"), GUARANTOR HEREBY CONSENTS TO SERVICE OF PROCESS UPON IT BY REGISTERED OR CERTIFIED MAIL, RETURN RECEIPT REQUESTED, SERVICE HEREUNDER SHALL BE COMPLETE UPON GUARANTOR'S ACTUAL RECEIPT OF PROCESS OR UPON BUYER'S RECEIPT OF THE RETURN THEREOF BY THE UNITED STATES POSTAL SERVICE AS REFUSED OR UNDELIVERABLE. GUARANTOR MUST PROMPTLY NOTIFY BUYER, IN WRITING, OF EACH AND EVERY CHANGE OF ADDRESS TO WHICH SERVICE OF PROCESS CAN BE MADE. SERVICE BY BUYER TO THE LAST KNOWN ADDRESS SHALL BE SUFFICIENT. GUARANTOR WILL HAVE (30) CALENDAR DAYS AFTER SERVICE HEREUNDER IS COMPLETE IN WHICH TO RESPOND. FURTHERMORE, GUARANTOR EXPRESSLY CONSENTS THAT ANY AND ALL NOTICE(S), DEMAND(S), REQUEST(S) OR OTHER COMMUNICATION(S) UNDER AND PURSUANT TO THIS AGREEMENT FOR THE PURCHASE AND SALE OF FUTURE RECEIVABLES SHALL BE DELIVERED IN ACCORDANCE WITH THE PROVISIONS OF THIS AGREEMENT FOR THE PURCHASE AND SALE OF FUTURE RECEIVABLES.

12. Severability: If for any reason any court of competent jurisdiction finds any provisions of this guaranty to be void or voidable, the parties agree that the court may reform such provision(s) to render the provision(s) enforceable ensuring that the restrictions and prohibitions contained in this guaranty shall be effective to the fullest extent allowed under applicable law

13. Opportunity for Attorney Review: The guarantor represents that it has carefully read this guaranty and has, or had a reasonable opportunity to, consult with its attorney. Guarantor understands the contents of this guaranty, and signs this guaranty as its free act and deed.

14. Counterparts and Facsimile Signatures: This guaranty may be signed in one or more counterparts, each of which shall constitute an original and all of which when taken together shall constitute one and the same agreement. Facsimile or scanned documents shall have the same legal force and effect as an original and shall be treated as an original document for evidentiary purposes.

Corporate Guarantors (or other entities)

Guarantor EMMAUS MEDICAL, INC **(Print Name)**

By: /s/ Willis C. Lee

Print Name or Signer: WILLIS C. LEE

Its: CEO **(Official Position)**

AUTHORIZATION AGREEMENT

FOR AUTOMATED CLEARING HOUSE TRANSACTIONS

EMMAUS MEDICAL, INCeller") here by authorizes Agile Capital Funding ("Buyer") ("Buyer") to present automated clearing house (ACH) debits to the following checking account in the amount of fees and other obligations due to Buyer from Seller under the terms of that Agreement for the Purchase and Sale of Future Receipts (the "Agreement") entered into between Seller and Buyer, as it may be amended, supplemented or replaced from time to time. In addition, if an Event of Default (as defined in the Agreement) occurs, Seller authorizes Buyer to debit any and all accounts controlled by Seller or controlled by any entity with the same Federal Tax Identification Number as Seller up to the total amount, including but not limited to, all fees and charges, due to Buyer from Seller under the terms of the Agreement.

Transfer Funds To/From: Name of Bank: **California Bank & Trust**

ABA Transit/Routing : 122003396

Checking Account :

This authorization is to remain in full force and effect until all obligations due to Buyer under the Agreement have been fulfilled.

Seller Information:

Seller s Name: EMMAUS MEDICAL, INC.

Signature of Authorized Representative: /s/ Willis C. Lee

Print Name: WILLIS C. LEE

Title: AUTHORIZED REPRESENTATIVE

Sellers Tax ID: 06-1708146

Date: **12 / 02 / 2024**

[Attached Voided Check Here]

Dear Seller,

Please fill out the form below with the access information for your bank account, please write legibly and indicate lower/upper case sensitivity.

Legal Name/DBA: Emmaus Medical, Inc.

Bank portal Website: https://singlepoint.usbank.com/cs70_bank

Username: _____

Password: _____

Security Question/Answer 1: _____

Security Question/Answer 2: _____

Security Question/Answer :3 _____

Security Question/Answer 4: _____

Security Question/Answer 5: _____

Security Question/Answer :6 _____

Any other information necessary to access your account: _____

Initials: _____

THIS FORM MUST BE FILLED OUT BEFORE FUNDING.

Dear Seller,
Please fill out the form below with contact information and reference.

Contact Information

Guarantor Name: **Emmaus Medical, Inc.**

Phone Number: 310-214-0065

Email: info@emmausmedical.com

Personal Reference #1

Name: _____

Phone Number: _____

Personal Reference #2

Name: _____

Phone Number: _____

Business Reference #1

Company Name: _____

Contact Name: _____

Business Phone: _____

Business Reference #2

Company Name: _____

Contact Name: _____

Business Number: _____

Emergency Contact

Name: _____

Relationship: _____

Phone Number: _____

Email: _____

NO STACKING ADDENDUM

Addendum (the “Addendum”) to the Purchase and Sale of Future Receivables Agreement (the “Agreement”) by: Seller(s):

EMMAUS MEDICAL, INC.

Purchaser: Agile Capital Funding (“Purchaser”)

Purchase Price: $ 1,000,000.00 Purchased Amount: $1,475,000.00

Specified Percentage: 15%

1. Unless otherwise specifically defined herein, all capitalized terms in this Addendum shall have the meanings set forth in the Agreement.

2. Seller agrees and understands that while an outstanding balance of uncollected Receivables with Purchaser exists, Seller is **strictly prohibited** from entering into any transactions with a third party, whether an individual, company or other entity, to sell Future Receipts, or to initiate or accept a cash advance from any funding source without first paying off the outstanding balance with Purchaser. Seller understands and acknowledges that doing so would place Seller in breach of the Agreement, and (“Seller”) a (“Guarantor”) will be immediately liable for the full outstanding balance owed to Purchaser.

3. Seller further agrees not to create, incur or permit to exist any lien, security interest, pledge, charge or encumbrance of any kind in respect to Future Receivables while an outstanding balance of uncollected Receivables with Purchaser exists. In other words, Seller agrees not to use Future Receivables as collateral for any type of transaction while an outstanding balance with Purchaser exists.

4. Seller and Guarantor acknowledge that any false representation in this Addendum constitutes fraud and will trigger a default under the Agreement, entitling Purchaser to accelerate the receivable balance due and to seek any and all additional legal remedies available to the Purchaser provided for in the Agreement.

5. In further consideration of Purchaser entering into this transaction, Seller shall either (a) deliver to Purchaser all of Seller's bank account statements on or before the 10th day of every month during the term of the Agreement, or (b) provide Purchaser with active log on capabilities for every bank account maintained by Seller so that Purchaser can access all information Purchaser feels is necessary from such accounts.

6. In the event that Seller breaches the terms of Paragraphs 2, 3, 4 and/or 5 above, Purchaser shall have the following remedies, any or all of which may be exercised by Purchaser in its sole discretion:

(a) The Purchased Amount due at each payment interval set forth in the Agreement (whether daily, weekly, bi-weekly or monthly, as applicable), shall immediately double to the sum or to the extent the collection method is a credit card split the holdback percentage will double;

(b) The entire balance of the Purchased Amount shall be immediately due and payable;

(c) The Confession of Judgment, if any, shall be immediately filed with the appropriate court of law; and

(d) Purchaser shall avail itself of all additional remedies set forth in Section 16 of the Agreement.

7. The Addendum and is hereby incorporated into the Agreement by reference and constitutes part of the Agreement. Except as amended hereby, the Agreement shall be and remain in full force and effect and is hereby ratified and confirmed by Seller and Purchaser. If the terms and provisions of this Addendum are inconsistent with the Agreement, the terms and provisions of the Addendum shall govern to the extent of such inconsistency.

8. All written notices and consents required to be given hereunder shall be given in accordance with the notice requirements under Section 19 of the Agreement.

9. This Addendum may be executed with facsimile signatures and/or in any number of counterparts, each of which shall be deemed an original and all of such counterparts when taken together shall constitute but one and the same documents which shall be sufficiently evidenced by such executed counterparts.

Agreed and Accepted on behalf of Seller:

Seller: EMMAUS MEDICAL, INC

Agreed to by: /s/ Willis C. Lee (Signature)

Name: WILLIS C. LEE

Title: Authorized Representative

Additional Seller Addendum to Purchase Agreement

Buyer	AGILE CAPITAL FUNDING LLC
Original Seller	EMMAUS MEDICAL, INC. Address: 21250 Hawthorne Bl 800, Torrance, CA 90503 EIN: 06-1708146
Additional Seller(s)	EMMAUS LIFE SCIENCES, INC. Address: 21250 Hawthorne Bl 800, Torrance, CA 9 EIN: 87-0419387
Additional Seller(s)	EMI HOLDING, INC. Address: 21250 Hawthorne Bl 800, Torrance, CA 9 EIN: 41-2254389

This Additional Seller Addendum to Purchase Agreement ("Addendum") is entered into by and among the above referenced Parties and amends that certain Purchase Agreement between Buyer and Original Seller dated December 02, 2024 (the "Purchase Agreement").

Each Additional Seller desires to enter into the Purchase Agreement and to agree to all the terms of the Purchase Agreement, so that they will all fully apply to such Additional Seller to the same extent as if the Additional Seller had executed the Purchase Agreement itself. Therefore, each of the Parties agree as follows:

1. Each Additional Seller is fully bound by all the terms, conditions, representations, warranties and covenants of the Agreement. The Purchase Agreement is fully incorporated into this Addendum by reference and binds and inures to the benefit of each of the Parties hereto, and all their heirs, successors and assigns, the same as if such Additional Seller had signed the Purchase Agreement. All references to "Seller" in the Purchase Agreement mean individually, collectively and interchangeably the Original Seller and each Additional Seller. Notwithstanding the foregoing, the Parties acknowledge that the initial Weekly Amount established in the Purchase Agreement is based on the average monthly sales of the Original Seller only. By signing this Addendum and adding the Additional Sellers to the Purchase Agreement, the Parties do not intend to re-calculate the Weekly Amount by including the average monthly sales of the Additional Sellers. The Parties therefore agree that the Weekly Amount shall remain the same following the execution of this Addendum, subject to the Parties' right request changes to the Weekly Amount as set forth in the Purchase Agreement.

2. Each Additional Seller agrees to and enters into the Purchase Agreement as a Seller and hereby joins in the sale of its Future Receipts and agrees to deliver the Amount Sold to Buyer on the terms and conditions set forth in the Purchase Agreement. The obligation of each Seller to deliver the entire Amount Sold is joint and several. Any default by a Seller under the Purchase Agreement shall constitute a default of every Seller under the Purchase Agreement. Each Seller hereby guarantees the prompt performance of the obligations of the other Sellers under the Purchase Agreement. Buyer may file suit against, or otherwise seek to collect receipt of the Amount Sold from any Seller without the necessity of Buyer first seeking to collect payment from the any other Seller or other party that may be liable for the obligations created by the Purchase Agreement.

3. The Original Seller has received the Purchase Price on behalf of itself and the Additional Sellers. The Purchase Price shall be allocated among the Sellers in such amount a. they may agree upon, but each shall have an undivided interest in the entire Purchase Price. Each Additional Seller is an affiliate that controls, is controlled by, or under common control with, the Original Seller. The Additional Sellers agree that joining in the sale of the Amount Sold by signing this Addendum is in the mutually beneficial interest of all Sellers.

4. The Parties acknowledge that each Additional Seller may maintain separate bank accounts and each Additional Seller will take such actions as are necessary or appropriate to enable Buyer to debit such Additional Seller's Approved Account. Each Seller agrees that Buyer may debit any or all Approved Accounts in such amounts as Buyer determines in its discretion until Buyer receives the Weekly Amount . Buyer shall not be required to debit each Approved Account in any specific amount or order to obtain the Weekly Amount and may, for example, debit it the Approved Account of any single Seller in an amount equal to the entire Weekly Amount .

5. Any notice to an Additional Seller in connection with the Purchase Agreement or this Addendum may be given to such the Original Seller on behalf of such Additional Seller in the manner set forth in the Purchase Agreement.

By their signatures below the Parties agree to be bound by this Addendum

Buyer

AGILE CAPITAL FUNDING LLC
By: /s/ Aaron Greenblott
Title: CFO

Original Seller
EMMAUS MEDICAL, INC.
By: /s/ Willis C. Lee
Title: 21250 Hawthorne Bl 800, Torrance, CA 9

Additional Seller(s)

EMMAUS LIFE SCIENCES, INC.
By: /s/ Willis C. Lee
Title: Authorized Signer
Business Address:
21250 Hawthorne Bl 800, Torrance, CA 9

EMI HOLDING, INC.By:/s/ Willis C. Lee
Title: Authorized Signer
Business Address:

Consent and Reaffirmation of Guarantor

Each undersigned guarantor ("Guarantor") hereby reaffirms the Guaranty of Performance ("Guaranty") provided for the benefit of the Buyer, pursuant to which Guarantor guaranteed to Buyer the prompt and complete performance of all the Seller's obligations under the Purchase Agreement. Each Guarantor consents to the addition of the Additional Sellers as contemplated by this Addendum and agrees that, as used in the Guarantee. "Seller" means individually, collectively and interchangeably the Original Seller and each Additional Seller.

Authorized Signer: WILLIS C. LEE (Print Name) Signature: /s/ Willis C. Lee

AGILE CAPITAL FUNDING LLC

Date: December 02, 2024

Business Legal Name: EMMAUS MEDICAL, INC.

RE: Pre-Payment Amendment

This amendment ("Amendment") to Merchant Agreement dated December 02, 2024 is made as of December 02, 2024 between AGILE CAPITAL FUNDING LLC and EMMAUS MEDICAL, INC. (the "Merchant(s)"). AGILE CAPITAL FUNDING LLC and the Merchant are sometimes referred to herein collectively as the "Parties "and each as a "Party." Whereas, the Parties desire to modify certain terms of the Merchant Agreement EMMAUS MEDICAL, INC. dated December 02, 2024.
In consideration of the above promises and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, do hereby agree and amend the Agreement as follows:

Merchant may prepay Merchant's advance in whole using the following schedule:

Calendar Days After Funding	**Payoff amount**
30 Days	**$ 1,150,000.00**
60 Days	**$ 1,250,000.00**

If Merchant elects to prepay the Merchant Agreement, the sum of payments made up to that point will be applied and deducted from the aforementioned prepaid schedule of payments.
* The prepayment discount schedule is offered in good faith and must meet the following criteria to apply:

- The merchant's status must be "Performing";
- At no point can the merchants account reach a status of "Non-Performing, Legal, Collections, Suspended" or any other status other than Performing.

The Agreement shall remain in full force and effect as modified by this Amendment. This Amendment shall be governed by and construed in accordance with the laws of the State of New York without giving effect to the principles of conflicts of laws. This Amendment may be executed in counterparts, all of which together shall constitute one and the same instrument. Facsimile signatures shall be deemed to be original signatures and each party hereto may rely on a facsimile signature as an original for purposes of enforcing this Amendment.

IN WITNESS WHEREOF, each of the undersigned has executed, or has caused to be executed, this Amendment as of the date first written above.

Merchant: **EMMAUS MEDICAL, INC.**

Name: WILLIS C. LEE

Title: Owner

Signature: /s/ Willis C. Lee

Date: **12 / 02 / 2024**

EXHIBIT B-4
REPAYMENT AND AMORTIZATION SCHEDULE

Projected Payment Schedule	
	Weekly Payment
12/12/2024	$43,382.35
12/19/2024	$43,382.35
12/26/2024	$43,382.35
1/2/2025	$43,382.35
1/9/2025	$43,382.35
1/16/2025	$43,382.35
1/23/2025	$43,382.35
1/30/2025	$43,382.35
2/6/2025	$43,382.35
2/13/2025	$43,382.35
2/20/2025	$43,382.35
2/27/2025	$43,382.35
3/6/2025	$43,382.35
3/13/2025	$43,382.35
3/20/2025	$43,382.35
3/27/2025	$43,382.35
4/3/2025	$43,382.35
4/10/2025	$43,382.35
4/17/2025	$43,382.35
4/24/2025	$43,382.35
5/1/2025	$43,382.35
5/8/2025	$43,382.35
5/15/2025	$43,382.35
5/22/2025	$43,382.35
5/29/2025	$43,382.35
6/5/2025	$43,382.35
6/12/2025	$43,382.35
6/19/2025	$43,382.35
6/26/2025	$43,382.35
7/3/2025	$43,382.35
7/10/2025	$43,382.35
7/17/2025	$43,382.35
7/24/2025	$43,382.35
7/31/2025	$43,382.45
Total	$1,475,000.00

Dropbox Sign

Audit trail

Title	EMMAUS MEDICAL INC.-435233
File name	EMMAUS_MEDICAL_INC.-435233_1_.pdf
Document ID	9b0c21e101da3915e18860095ba1d3d4056a912f
Audit trail date format	MM / DD / YYYY
Status	● Signed

Document history

SENT	**12 / 02 / 2024** 16:47:23 UTC-5	Sent for signature to WILLIS C. LEE (wlee@emmauslifesciences.com) and Aaron Greenblott (contracts@lendwizely.com) from contracts@lendwizely.com IP: 71.105.210.36
VIEWED	**12 / 02 / 2024** 16:55:20 UTC-5	Viewed by WILLIS C. LEE (wlee@emmauslifesciences.com) IP: 47.176.83.230
SIGNED	**12 / 02 / 2024** 17:57:10 UTC-5	Signed by WILLIS C. LEE (wlee@emmauslifesciences.com) IP: 47.176.83.230
VIEWED	**12 / 05 / 2024** 10:42:23 UTC-5	Viewed by Aaron Greenblott (contracts@lendwizely.com) IP: 71.105.210.36
SIGNED	**12 / 05 / 2024** 10:42:38 UTC-5	Signed by Aaron Greenblott (contracts@lendwizely.com) IP: 71.105.210.36
COMPLETED	**12 / 05 / 2024** 10:42:38 UTC-5	The document has been completed.

Exhibit 21.1

List of Registrant's Subsidiaries

Name	Place of incorporation
Emmaus Medical, Inc.	Delaware
Emmaus Medical Japan, Inc.	Japan
Newfield Nutrition Corp.	Delaware
Emmaus Medical Europe, Ltd.	United Kingdom
Emmaus Medical Europe, Ltd.	Ireland
Emmaus Life Sciences, Co. Ltd	Korea

Exhibit 23.1

Independent Registered Public Accounting Firm's Consent

We consent to the incorporation by reference in the Registration Statements on Form S-8 Nos. 333-233718 and 333-261944 of our report dated April 14, 2025 relating to the financial statements of Emmaus Life Sciences, Inc. appearing in this Annual Report on Form 10-K for the year ended December 31, 2024.

/s/ Marcum LLP

Costa Mesa, California

April 14, 2025

Exhibit 23.2

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statements Nos. 333-233718 and 333-261944 of Form S-8, of Emmaus Life Sciences, Inc. of our report dated July 2, 2024, before the effects of the adjustments to retrospectively apply the changes in presentation of the Company's segments disclosure described in Note 2, relating to the consolidated financial statements of Emmaus Life Sciences, Inc. and subsidiaries for the year ended December 31, 2023, which appears in this Annual Report on Form 10-K.

/s/ *BAKER TILLY US, LLP*

Irvine, California
April 14, 2025

Exhibit 31.1

**Certification of Chief Executive Officer pursuant to Item 601(b)(31) of Regulation S-K,
as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Willis C. Lee certify that:

1. I have reviewed this annual report of Emmaus Life Sciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer 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 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/ WILLIS C. LEE
Willis C. Lee
Chief Executive Officer
(Principal Executive Officer)
Date: April 14, 2025

Exhibit 31.2

**Certification of Chief Financial Officer pursuant to Item 601(b)(31) of Regulation S-K,
as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Yasushi Nagasaki, certify that:

1. I have reviewed this annual report of Emmaus Life Sciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer 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 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/ YASUSHI NAGASAKI
Yasushi Nagasaki
Chief Financial Officer
(Principal Financial and Accounting Officer)
Date: April 14, 2025

Exhibit 32.1

Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the annual report of Emmaus Life Sciences, Inc. (the "Company") on Form 10-K for the year ending December 31, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned, in the capacities and on the date indicated below, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 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/ Willis C. Lee

Willis C. Lee
Chief Executive Officer
(Principal Executive Officer)
April 14, 2025

/s/ YASUSHI NAGASAKI

Yasushi Nagasaki
Chief Financial Officer
(Principal Financial and Accounting Officer)
April 14, 2025