Offering Memorandum: Part II of Offering Document (Exhibit A to Form C)

StemBioSys, Inc.
3463 Magic Drive Suite #110
San Antonio , TX 78229
https://stembiosys.com

Up to $3,000,000.00 in Series C-1 Preferred Stock at $3.00
Minimum Target Amount: $15,000.00

A crowdfunding investment involves risk. You should not invest any funds in this offering unless you can afford to lose your entire investment.

In making an investment decision, investors must rely on their own examination of the issuer and the terms of the offering, including the merits and risks involved. These securities have not been recommended or approved by any federal or state securities commission or regulatory authority. Furthermore, these authorities have not passed upon the accuracy or adequacy of this document.

The U.S. Securities and Exchange Commission does not pass upon the merits of any securities offered or the terms of the offering, nor does it pass upon the accuracy or completeness of any offering document or literature.

These securities are offered under an exemption from registration; however, the U.S. Securities and Exchange Commission has not made an independent determination that these securities are exempt from registration.

In the event that we become a reporting company under the Securities Exchange Act of 1934, we intend to take advantage of the provisions that relate to "Emerging Growth Companies" under the JOBS Act of 2012, including electing to delay compliance with certain new and revised accounting standards under the Sarbanes-Oxley Act of 2002.

Company:

Company: StemBioSys, Inc.
Address: 3463 Magic Drive Suite #110, San Antonio , TX 78229
State of Incorporation: DE
Date Incorporated: June 25, 2012

Terms:

Equity

Offering Minimum: $15,000.00 | 5,000 shares of Series C-1 Preferred Stock
Offering Maximum: $3,000,000.00 | 1,000,000 shares of Series C-1 Preferred Stock
Type of Security Offered: Series C-1 Preferred Stock
Purchase Price of Security Offered: $3.00
Minimum Investment Amount (per investor): $300.00

*Maximum number of shares offered subject to adjustment for bonus shares. See Bonus info below.

Time-Based Perk

Invest $2,500+ within the first 72 hours and receive 10% bonus shares

Invest $5,000+ within the first 72 hours and receive 15% bonus shares

Invest $50,000+ within the first 72 hours and receive 20% bonus shares

Invest $2,500+ within the first 2 weeks and receive 5% bonus shares

Invest $5,000+ within the first 2 weeks and receive 10% bonus shares

Invest $50,000+ within the first 2 weeks and receive 15% bonus shares

Volume-Based Perks

Tier 1 Perk - Invest $5,000+ and receive 5% bonus shares

Tier 2 Perk — Invest $10,000+ and receive 8% bonus shares

Tier 3 Perk — Invest $25,000+ and receive 10% bonus shares

Tier 4 Perk — Invest $50,000+ and receive 12% bonus shares

Tier 5 Perk — Invest $100,000+ and receive 15% bonus shares

*Note: Time Based and Volume Based Perks cannot be combined. Investor shall receive the bonus shares on EITHER the Time-Based OR Value Based Perks, whichever results in the higher bonus share issuance.

**In order to receive perks from an investment, one must submit a single investment in the same offering that meets the minimum perk requirement. Bonus shares from perks will not be granted if an investor submits multiple investments that, when combined, meet the perk requirement. All perks occur when the offering is completed.

***Crowdfunding investments made through a self-directed IRA cannot receive non-bonus share perks due to tax laws. The Internal Revenue Service (IRS) prohibits self-dealing transactions in which the investor receives an immediate, personal financial gain on investments owned by their retirement account. As a result, an investor must refuse those non-bonus share perks because they would be receiving a benefit from their IRA account.

The 10% StartEngine Venture Club

StemBioSys, Inc. will offer 10% additional bonus shares for all investments that are committed by investors that are eligible for the StartEngine Crowdfunding Inc. Venture Club.

This means eligible StartEngine investors will receive a 10% bonus for any shares they purchase in this offering. For example, if you buy 100 shares of Series C-1 Preferred Stock at $3.00 / share, you will receive 110 shares of Series C-1 Preferred Stock, meaning you'll own 110 shares for $300. Fractional shares will not be distributed and share bonuses will be determined by rounding down to the nearest whole share.

This 10% Bonus is only valid during the investors eligibility period. Investors eligible for this bonus will also have priority if they are on a waitlist to invest and the company surpasses its maximum funding goal. They will have the first opportunity to invest should room in the offering become available if prior investments are canceled or fail.

Investors will receive the highest single bonus they are eligible for among the bonuses based on the amount invested and time of offering elapsed (if any). Eligible investors will also receive the Venture Club Bonus in addition to the aforementioned bonus.

The Company and its Business

Company Overview

Company Background

StemBioSys was incorporated as a Delaware C-Corporation in June 2012. StemBioSys is in the business of developing and commercializing research tools, therapeutic, and diagnostic applications for a novel and patented biologically derived extra-cellular matrix for the purpose of isolating, expanding and delivering unique populations of cells.

StemBioSys currently employs 9 full-time employees.

StemBioSys is based in San Antonio, Texas and operates at the website www.stembiosys.com. Products

The Company currently generates revenue through the sale of its proprietary Matrix and Cell products to academic and industry researchers. The Company has additional research products in the development pipeline with rolling launches expected to continue over the next several years. In addition, the Company applies for and occasionally receives grant funding from various sources for continued research on diagnostic and therapeutic applications for its products which may one day develop into commercial applications.

The company also provides custom services to customers. Many of these services involve modifying existing products to meet specific customer requirements. For instance, for one customer, the company "tagged" its existing endothelial cell product to enable the customer to be able to track the cells as they were cultured and grew into the final form. Other kinds of custom work includes providing products that are complementary to existing customers. For instance, StemBioSys process osteocytes (the cells that make up bone) for a customer on a custom basis.

The company also announced in March 2024, that it has partnered with an academic research lab to provide several cardiac studies. These studies will use the company's CELLvo Matrix Plus and CELLvo Atrial Cardiomyocytes.

Customers

In the research products space, the key customers are domestic and international academic and industrial partners who are engaged in cell culture and/or the production of cellular products for basic research, applied research, diagnostic and preclincal drug discovery activities.

Intellectual Property (IP)

The Intellectual Property for the core technology was licensed from the University of Texas Board of Regents. In exchange for an exclusive worldwide license to the patents and technology, StemBioSys pays an annual license fee and a low single digit royalty on product sales that are covered under the license patents. In addition to the technology licensed from The University of Texas, the Company has generated its' own intellectual property in several areas including the recently developed amniotic fluid matrix (The Matrix Plus Product), and IP around the maturation of IPS derived cardiomycytes on our novel matrix.

StemBioSys has a robust IP portfolio with 14 issued patents and multiple pending applications focused on its core technology - the cell-derived extracellular matrix expansion platform. Issued Patents include patents in the US, China, Australia, Hong Kong, Canada, and the EU for technologies related to mesenchymal stem cells' maintenance and propagation, and isolation of human umbilical cord blood-derived mesenchymal stem cells. There are also a set of patents that cover culturing the following tissue types: epidermal, dermal, adipose, cardiac, kidney, muscle, liver, cartlidge and pancreas. Patents also cover the tissue of the endometrium of the uterus, umbilical cord tissue and dental pulp tissue. Other patents cover a matrix produced by cells derived from amniotic fluid and the maturation of cardiomyocytes derived from induced pluripotent stem cells (iPSCs) on this matrix..

Pending Patent Applications: Most of the pending patent applications cover the areas above but in geographies where patent coverage has not yet been granted.

StemBioSys's strategic approach to partnerships and its aggressive stance on protecting and expanding its IP portfolio signify its commitment to leading in the regenerative medicine space and providing advanced solutions in laboratory assays/tools, diagnostics and ultimately therapeutics.

Partnerships

Partnerships and Collaborations

StemBioSys has developed a broad distribution network for its cell and stem cell culture tools, both domestically in the

United States with partners such as VWR-Avantor, Gemini Bio-products, and Fisher Scientific, and internationally with partners including CalTag MedSystems (UK), Biozol (Germany, Austria and Switzerland) Funakoshi (Japan), SeouLin (Korea), Mitek Lab Co. (Taiwan) and AXT (Australia). The company also engages in strategic partnerships for product launches. One example of this is a collaboration the company has with Reprocell. This collaboration supported development of the company's atrial cardiomyocyte product. Further, StemBioSys is actively involved in collaborations with academic and corporate entities in the stem cell and regenerative medicine sector. These collaborations aim to explore the CELLvo™ Matrix platform's effects on various cells for applications in cardiovascular diseases, bone repair, diabetes, neural repair, reproductive medicine, and diagnostics. Notable projects include:

Therapeutic - Articular Cartilage Repair: In collaboration with Rutgers Center for Biomaterials, focusing on cartilage cell growth on a human chondrocyte-based matrix, with findings published in "Acta Biomaterialia." This project underlines efforts toward developing FDA-supported therapeutic products for articular diseases.

Drug Testing & Diagnostics: Partnership with a large academic institution in the US to develop a matrix configuration enhancing stem cells' maturation into cardiomyocytes, potentially influencing FDA drug screening protocols.

Islet Cells: The company partnered with the lab of its Scientific Founder and was successful in obtaining a Phase 1 Small Business Innovation Research Grant (SBIR). The primary aim of this grant is to confirm the improved performance of human islet cells on CELLvo Matrix Plus relative to other substrates. The company intends to use the data from this grant to provide the basis for future grant applications. This work could ultimately have therapeutic benefits.

Competitors and Industry

Competitors

The competitive landscape for StemBioSys involves both direct and indirect competitors, each offering distinct products and services within the biotechnology and stem cell manufacturing sectors. These competitors vary in their focus areas, ranging from cell manufacturing and contract manufacturing services to other manufacturers of cell culture substraits.. Key competitors include:

Cellular Dynamics International, Inc. (a subsidiary of Fujifilm Medical Systems USA, Inc.): Specializes in developing and manufacturing human cells, including various types of human induced pluripotent stem cells (iPSCs) and cells for drug discovery, toxicity testing, disease modeling, and stem cell banking. The company serves a wide range of clients, including biopharmaceutical companies, government and academic institutions, and stem cell banks.

RoosterBio, Inc.: Focuses on developing mesenchymal stem cells (MSCs) for the regenerative medicine industry, offering products designed for tissue engineers, cell therapists, and developers of cell-based technologies and devices. The company has strategic alliances to support its mission in the regenerative medicine field.

Many companies make products that can be used to culture cells, These products include Matrigel (a Corning Product), Bioliminin Products (manufactured by Biolimina) and Fibronectin (a protein available from several suppliers).

Each competitor presents unique challenges and opportunities for StemBioSys. For instance, FUJIFILM Cellular Dynamics and Rooster Bio offer specialized products and technologies in cells and regenerative medicine, The matrix competitors' products each present a unique set of competitive challenges and vary depending upon the specific nature of each product.

For its matrix products, StemBioSys's competitive advantage results from the fact that the products are produced by cells. This approach assures that when cells are cultured on the matrix, the cells "recognize" the matrix and respond largely as they would the human body. The results achieved from this approach ensure that StemBioSys's products produce results that are biologically relevant. This means that our customers can be assured that the results they achieve when working with our products in their labs, are highly predictive of what will happen when the same process occurs in the human body.

As just one example, this provides researchers with a high degree of certainty that if particular drug compound causes cells to respond in a particular way in a laboratory dish with StemBioSys product, the researcher will have a high degree of confidence that the same response will be observed when the drug is administered to humans. The company's strateic advantages lie in its unique matrix technology and the potential applications of its patented extracellular matrix. However, the company faces challenges in market penetration and access to capital, amidst a landscape of well-established and diversified competitors.

Industry

StemBioSys operates broadly in the healthcare industry. The company is specifically in the Biotechnology sub-industry within Healthcare. Today the company is focused on using its technologies to provide biologically based products for use in basic scientific research and drug development.

Drivers, Challenges, and Outlook:

The stem cell manufacturing market is anticipated to grow at a CAGR of nearly 12.9%, driven by technological

advancements in stem cell manufacturing and preservation, increased awareness about stem cell therapy's therapeutic potential, and the impact of the COVID-19 pandemic which highlighted stem cell-based therapies for treatment. However, the popularity of alternative procedures poses significant challenges to market growth.

Industry Segmentation:

The cell culture market is segmented by product type (culture media, consumables, instruments, cell lines, and services), application (therapy, drug discovery, banking), end-user (pharmaceutical/biotech companies, banks), and geography.
Market Trends:

Near term the most significant market trend that will impact the company is the ongoing movement away from doing scientific testing in animals. The FDA modernization act passed in 2022 authorized the use of alternatives to animal testing to confirm the safety and effectiveness of a drug.

Longer term, the need for new approaches to address various diseases will drive more research spending on products such as StemBioSys. The need for ongoing research will only grow as the world population ages resulting in more diseases needing treatments.

Geographical Outlook

North America is expected to hold a significant market share, attributed to the presence of key players, robust research infrastructure, and substantial public and private funding for stem cell and other relevant research.

Recent Developments:

Recent developments include expansion of manufacturing facilities, significant investments in stem cell startups, and initiatives aimed at expanding access to stem cell-based therapies.

Current Stage and Roadmap

Current Product Stage:

StemBioSys has successfully commercialized products and continues to develop additional research products, indicating a stage of ongoing product development and initial commercial success.

Future Roadmap:

The company plans to continue its research and development efforts, with rolling launches of new products expected over the coming years. Additionally, securing further grant funding for diagnostic and therapeutic applications indicates a focus on expanding its product offerings and applications.

The Team

Officers and Directors

Name: Robert Allen Hutchens

Robert Allen Hutchens's current primary role is with the Issuer.

Positions and offices currently held with the issuer:

- Position: President & Chief Executive Officer
  Dates of Service: July, 2014 - Present
  Responsibilities: Leading all fundraising activities, strategic planning, and overseeing product development. Hours worked at Principal Occupation: 40+ hours/week. Salary: $175,000 ($60,000 currently reduced) and 650,000 options .

Other business experience in the past three years:

- Employer: Glenview Capital
  Title: Consultant
  Dates of Service: January, 2015 - Present
  Responsibilities: Provides periodic insight into the life sciences tool industry to Glenview (3 to 4 calls per quarter).

Name: Mark Douglas Horsey

Mark Douglas Horsey's current primary role is with the Issuer.

Positions and offices currently held with the issuer:

- Position: Chief Financial Officer
  Dates of Service: September, 2012 - Present
  Responsibilities: Lead all financial aspects of the Company Salary: $125,000 ($60,000 currently reduced) and 195,000 Stock Options

Other business experience in the past three years:

- Employer: Rapamycin Holdings, Inc. dba Emtora Biosciences
  Title: Chief Financial Officer
  Dates of Service: February, 2012 - Present
  Responsibilities: Lead all financial aspects of the company.

Other business experience in the past three years:

- Employer: Bluegrass Vascular Technologies Inc.
  Title: Chief Financial Officer
  Dates of Service: November, 2016 - Present
  Responsibilities: Lead all financial aspects of the company. Company Sold to Merit Medical, Inc. May 2023

Name: Xiao-Dong Chen

Xiao-Dong Chen's current primary role is with the Issuer.

Positions and offices currently held with the issuer:

- Position: Board Member, Scientific Advisor
  Dates of Service: October, 2010 - Present
  Responsibilities: Advises Company on emerging trends in the regenerative medicine space. Collaborates on specifi R&D projets. Consulting Fee:$40K and founders shares in the Company

Other business experience in the past three years:

- Employer: UTHSCSA
  Title: Professor
  Dates of Service: July, 2007 - Present
  Responsibilities: Research and teaching.

Name: Jean Mary Cheever

Jean Mary Cheever's current primary role is with 501BIO LLC. Jean Mary Cheever currently services 4 hours per week in their role with the Issuer.

Positions and offices currently held with the issuer:

- Position: Board Member
  Dates of Service: January, 2013 - Present
  Responsibilities: Serves on the board of SBS and chairs the Audit & Governance Committee in exchange for stock options.

Other business experience in the past three years:

- Employer: 501BIO LLC
  Title: Managing Partner
  Dates of Service: January, 2013 - Present
  Responsibilities: Invests in startup companies in a wide variety of industries.

Name: Fred Bert Dinger III

Fred Bert Dinger III's current primary role is with Aerin Medical, Inc.. Fred Bert Dinger III currently services 5 hours per week in their role with the Issuer.

Positions and offices currently held with the issuer:

- Position: Chairman of the Board
  Dates of Service: February, 2023 - Present
  Responsibilities: Leadership and strategic direction as Chairman in exchange for 250,000 common share options

Other business experience in the past three years:

- Employer: Aerin Medical, Inc.
  Title: Chief Operating Officer
  Dates of Service: February, 2015 - Present
  Responsibilities: Responsible for Engineering, Manufacturing, Quality, and Regulatory functions of the company.

Name: Paul Charles Castella

Paul Charles Castella's current primary role is with Xenotope Diagnostics Inc.. Paul Charles Castella currently services 2 hours per week in their role with the Issuer.

Positions and offices currently held with the issuer:

- Position: Board Member
  Dates of Service: February, 2013 - Present
  Responsibilities: Board member duties, including transaction committee work in exchange for stock options

Other business experience in the past three years:

- Employer: Xenotope Diagnostics Inc.
  Title: President and CEO
  Dates of Service: February, 2001 - Present
  Responsibilities: Manage corporate and licensing aspects of the company.

Other business experience in the past three years:

- Employer: Hera Biotech
  Title: Co-Founder, Executive Chairman
  Dates of Service: January, 2020 - Present
  Responsibilities: Leading in the development of cellular & molecular diagnostics for endometriosis within the San Antonio, Texas Metropolitan Area.

Other business experience in the past three years:

- Employer: Targeted Technology Fund II
  Title: Senior Managing Partner
  Dates of Service: March, 2013 - Present
  Responsibilities: Overseeing a life science venture fund focused on investments in the life sciences sector, based in San Antonio, TX.

Other business experience in the past three years:

- Employer: Innovative Trauma Care Inc.
  Title: Executive Chairman
  Dates of Service: March, 2013 - Present
  Responsibilities: Guiding the company in the development and commercialization of hemorrhage control devices, operating within the San Antonio, Texas Metropolitan Area.

Name: Martin Joseph Landon

Martin Joseph Landon's current primary role is with BioBridge Global. Martin Joseph Landon currently services 1 hours per week in their role with the Issuer.

Positions and offices currently held with the issuer:

- Position: Board Member
  Dates of Service: November, 2024 - Present

Responsibilities: Board Member duties on behalf of his employer/investor.

Other business experience in the past three years:

- Employer: BioBridge Global
  Title: President & CEO of BioBridge Global
  Dates of Service: October, 2017 - Present
  Responsibilities: Establishing, building, and operating a contract manufacturing organization.

Name: Steven Andrew Davis

Steven Andrew Davis's current primary role is with Dermatology and Laser Center of San Antonio. Steven Andrew Davis currently services 3 hours per week in their role with the Issuer.

Positions and offices currently held with the issuer:

- Position: Co-founder, Board Member, Chief Medical Officer
  Dates of Service: July, 2017 - Present
  Responsibilities: Initial capital provision, headed first private offering, board service, and CMO duties.

Other business experience in the past three years:

- Employer: Dermatology and Laser Center of San Antonio
  Title: Owner
  Dates of Service: January, 1983 - Present
  Responsibilities: Practicing Dermatologist

Name: Ian William David Clements

Ian William David Clements's current primary role is with Private Investor. Ian William David Clements currently services 2 hours per week in their role with the Issuer.

Positions and offices currently held with the issuer:

- Position: Board Member
  Dates of Service: January, 2013 - Present
  Responsibilities: Active board member duties.

Other business experience in the past three years:

- Employer: Private Investor
  Title: Owner
  Dates of Service: March, 2004 - Present
  Responsibilities: Self Directed private equity investing

Risk Factors

The SEC requires the company to identify risks that are specific to its business and its financial condition. The company is still subject to all the same risks that all companies in its business, and all companies in the economy, are exposed to. These include risks relating to economic downturns, political and economic events and technological developments (such as hacking and the ability to prevent hacking). Additionally, early-stage companies are inherently more risky than more developed companies. You should consider general risks as well as specific risks when deciding whether to invest.

These are the risks that relate to the Company:

Uncertain Risk
An investment in the Company (also referred to as "we", "us", "our", or the "Company") involves a high degree of risk and should only be considered by those who can afford the loss of their entire investment. Furthermore, the purchase of any securities should only be undertaken by persons whose financial resources are sufficient to enable them to indefinitely retain an illiquid investment. Each investor in the Company should research thoroughly any offering before making an investment decision and consider all of the information provided regarding the Company as well as the following risk factors, in addition to the other information in the Company's Form C. The following risk factors are not intended, and shall not be deemed to be, a complete description of the commercial, financial, and other risks inherent in the investment in the

Company.

Our business projections are only projections
There can be no assurance that the Company will meet its projections. There can be no assurance that the Company will be able to find sufficient demand for its product or service, that people think it's a better option than a competing product or service, or that we will be able to provide a product or service at a level that allows the Company to generate revenue, make a profit, or grow the business.

Any valuation is difficult to assess
The valuation for the offering was established by the Company. Unlike listed companies that are independently valued through market-driven stock prices, the valuation of private companies, especially startups, is difficult to assess, may not be exact, and you may risk overpaying for your investment.

The transferability of the Securities you are buying is limited
You should be prepared to hold this investment for several years or longer. For the 12 months following your investment, there will be restrictions on the securities you purchase. More importantly, there are a limited number of established markets for the resale of these securities. As a result, if you decide to sell these securities in the future, you may not be able to find, or may have difficulty finding, a buyer, and you may have to locate an interested buyer when you do seek to resell your investment. The Company may be acquired by an existing player in the industry. However, that may never happen or it may happen at a price that results in you losing money on this investment.

Your investment could be illiquid for a long time
You should be prepared to hold this investment for several years or longer. For the 12 months following your investment, there will be restrictions on how you can resell the securities you receive. More importantly, there are limited established markets for these securities. As a result, if you decide to sell these securities in the future, you may not be able to find a buyer. The Company may be acquired by an existing player in the same or a similar industry. However, that may never happen or it may happen at a price that results in you losing money on this investment.

The Company may undergo a future change that could affect your investment
The Company may change its business, management or advisory team, IP portfolio, location of its principal place of business or production facilities, or other change which may result in adverse effects on your investment. Additionally, the Company may alter its corporate structure through a merger, acquisition, consolidation, or other restructuring of its current corporate entity structure. Should such a future change occur, it would be based on management's review and determination that it is in the best interests of the Company.

Your information rights are limited with limited post-closing disclosures
The Company is required to disclose certain information about the Company, its business plan, and its anticipated use of proceeds, among other things, in this offering. Early-stage companies may be able to provide only limited information about their business plan and operations because it does not have fully developed operations or a long history to provide more disclosure. The Company is also only obligated to file information annually regarding its business, including financial statements. In contrast to publicly listed companies, investors will be entitled only to that post-offering information that is required to be disclosed to them pursuant to applicable law or regulation, including Regulation CF. Such disclosure generally requires only that the Company issue an annual report via a Form C-AR. Investors are generally not entitled to interim updates or financial information.

Some early-stage companies may lack professional guidance
Some companies attribute their success, in part, to the guidance of professional early-stage advisors, consultants, or investors (e.g., angel investors or venture capital firms). advisors, consultants, or investors may play an important role in a company through their resources, contacts, and experience in assisting early-stage companies in executing their business plans. An early-stage company primarily financed through Regulation Crowdfunding may not have the benefit of such professional investors, which may pose a risk to your investment.

We may not have enough capital as needed and may be required to raise more capital.
We anticipate needing access to credit in order to support our working capital requirements as we grow. It is a difficult environment for obtaining credit on favorable terms. If we cannot obtain credit when we need it, we could be forced to raise additional equity capital, modify our growth plans, or take some other action. Issuing more equity may require bringing on additional investors. Securing these additional investors could require pricing our equity below its current price. If so, your investment could lose value as a result of this additional dilution. In addition, even if the equity is not priced lower, your ownership percentage would be decreased with the addition of more investors. If we are unable to find additional investors willing to provide capital, then it is possible that we will choose to cease our sales activity. In that case, the only asset remaining to generate a return on your investment could be our intellectual property. Even if we are not forced to cease our sales activity, the unavailability of credit could result in the Company performing below expectations, which could adversely impact the value of your investment.

Terms of subsequent financings may adversely impact your investment
We will likely need to engage in common equity, debt, or preferred stock financings in the future, which may reduce the value of your investment in the Company. Interest on debt securities could increase costs and negatively impact operating

results. Preferred stock could be issued in series from time to time with such designation, rights, preferences, and limitations as needed to raise capital. The terms of preferred stock could be more advantageous to those investors than to the holders of common stock or other securities. In addition, if we need to raise more equity capital from the sale of Common Stock, institutional or other investors may negotiate terms that are likely to be more favorable than the terms of your investment, and possibly a lower purchase price per security.

Management's Discretion as to Use of Proceeds
Our success will be substantially dependent upon the discretion and judgment of our management team with respect to the application and allocation of the proceeds of this offering. The Use of Proceeds described below is an estimate based on our current business plan. We, however, may find it necessary or advisable to re-allocate portions of the net proceeds reserved for one category to another, and we will have broad discretion in doing so.

Projections: Forward Looking Information
Any projections or forward-looking statements regarding our anticipated financial or operational performance are hypothetical and are based on management's best estimate of the probable results of our operations and may not have been reviewed by our independent accountants. These projections are based on assumptions that management believes are reasonable. Some assumptions invariably will not materialize due to unanticipated events and circumstances beyond management's control. Therefore, actual results of operations will vary from such projections, and such variances may be material. Any projected results cannot be guaranteed.

The amount raised in this offering may include investments from company insiders or immediate family members Officers, directors, executives, and existing owners with a controlling stake in the Company (or their immediate family members) may make investments in this offering. Any such investments will be included in the raised amount reflected on the campaign page.

Reliance on a single service or product
All of our current services are variants of one type of service and/or product. Relying heavily on a single service or product can be risky, as changes in market conditions, technological advances, shifts in consumer preferences, or other changes can adversely impact the demand for the product or service, potentially leading to revenue declines or even business failure.

Some of our products are still in the prototype phase and might never be operational products
Developing new products and technologies can be a complex process that involves significant risks and uncertainties. Technical challenges, design flaws, manufacturing defects, and regulatory hurdles can all impact the success of a product or service. It is possible that there may never be an operational product or that the product may never be used to engage in transactions. It is possible that the failure to release the product is the result of a change in business model upon the Company's making a determination that the business model, or some other factor, will not be in the best interest of the Company and its stockholders.

Developing new products and technologies entails significant risks and uncertainties
Competition can be intense in many markets, and a failure to keep up with competitors or anticipate shifts in market dynamics can lead to revenue declines or market share losses. We are currently in the research and development stage and have only manufactured a prototype for our service. Delays or cost overruns in the development of our service and failure of the product to meet our performance estimates may be caused by, among other things, unanticipated technological hurdles, difficulties in manufacturing, changes to design, and regulatory hurdles. Any of these events could materially and adversely affect our operating performance and results of operations.

Supply Chain and Logistics Risks
The availability of raw materials, transportation costs, and supply chain disruptions can all impact the ability to manufacture and distribute products or services, leading to lost revenue or increased costs. Products and services that are not available when customers need them can lead to lost sales and damage to the brand's reputation.

Quality and Safety of our Product and Service
The quality of a product or service can vary depending on the manufacturer or provider. Poor quality can result in customer dissatisfaction, returns, and lost revenue. Furthermore, products or services that are not safe can cause harm to customers and result in liability for the manufacturer or provider. Safety issues can arise from design flaws, manufacturing defects, or improper use.

Minority Holder; Securities with No Voting Rights
The Series C-1 Preferred Stock that an investor is buying has no voting rights attached to them. This means that you will have no rights in dictating how the Company will be run. You are trusting in management's discretion in making good business decisions that will grow your investments. Furthermore, in the event of a liquidation of our company, you will only be paid out if there is any cash remaining after all of the creditors of our company have been paid out.

You are trusting that management will make the best decision for the company
You are trusting in management's discretion. You are buying securities as a minority holder, and therefore must trust the management of the Company to make good business decisions that grow your investment.

Insufficient Funds
The Company might not sell enough securities in this offering to meet its operating needs and fulfill its plans, in which case it may cease operating and result in a loss on your investment. Even if we sell all the stock we are offering now, the Company may need to raise more funds in the future, and if unsuccessful in doing so, the Company will fail. Even if we do make a successful offering in the future, the terms of that offering might result in your investment in the Company being worth less, if later investors have better terms than those in this offering.

This offering involves "rolling closings," which may mean that earlier investors may not have the benefit of information that later investors have.
Once we meet our target amount for this offering, we may request that StartEngine instruct the escrow agent to disburse offering funds to us. At that point, investors whose subscription agreements have been accepted will become our investors. All early-stage companies are subject to a number of risks and uncertainties, and it is not uncommon for material changes to be made to the offering terms, or to companies' businesses, plans, or prospects, sometimes with little or no notice. When such changes happen during the course of an offering, we must file an amendment to our Form C with the SEC, and investors whose subscriptions have not yet been accepted will have the right to withdraw their subscriptions and get their money back. Investors whose subscriptions have already been accepted, however, will already be our investors and will have no such right.

Our new product could fail to achieve the sales projections we expect
Our growth projections are based on the assumption that with an increased advertising and marketing budget, our products will be able to gain traction in the marketplace at a faster rate than our current products have. It is possible that our new products will fail to gain market acceptance for any number of reasons. If the new products fail to achieve significant sales and acceptance in the marketplace, this could materially and adversely impact the value of your investment.

We face significant market competition
We will compete with larger, established companies that currently have products on the market and/or various respective product development programs. They may have much better financial means and marketing/sales and human resources than us. They may succeed in developing and marketing competing equivalent products earlier than us, or superior products than those developed by us. There can be no assurance that competitors will not render our technology or products obsolete or that the products developed by us will be preferred to any existing or newly developed technologies. It should further be assumed that competition will intensify.

We are an early stage company operating in a new and highly competitive industry
The Company operates in a relatively new industry with a lot of competition from both startups and established companies. As other companies flood the market and reduce potential market share, Investors may be less willing to invest in a company with a declining market share, which could make it more challenging to fund operations or pursue growth opportunities in the future.

Intense Market Competition
The market in which the company operates may be highly competitive, with established players, emerging startups, and potential future entrants. The presence of competitors can impact the company's ability to attract and retain customers, gain market share, and generate sustainable revenue. Competitors with greater financial resources, brand recognition, or established customer bases may have a competitive advantage, making it challenging for the company to differentiate itself and achieve long-term success.

Vulnerability to Economic Conditions
Economic conditions, both globally and within specific markets, can significantly influence the success of early-stage startups. Downturns or recessions may lead to reduced consumer spending, limited access to capital, and decreased demand for the company's products or services. Additionally, factors such as inflation, interest rates, and exchange rate fluctuations can affect the cost of raw materials, operational expenses, and profitability, potentially impacting the company's ability to operate.

Uncertain Regulatory Landscape
Due to the unestablished nature of the market the business operates within, the potential introduction of new laws or industry-specific standards can impose additional costs and operational burdens on the company. Non-compliance or legal disputes may result in fines, penalties, reputational damage, or even litigation, adversely affecting the company's financial condition and ability to operate effectively.

We have existing patents that we might not be able to protect properly
One of the Company's most valuable assets is its intellectual property. The Company's owns some trademarks, copyrights, Internet domain names, and trade secrets. We believe one of the most valuable components of the Company is our intellectual property portfolio. Due to the value, competitors may misappropriate or violate the rights owned by the Company. The Company intends to continue to protect its intellectual property portfolio from such violations. It is important to note that unforeseeable costs associated with such practices may requiring using capital of the Company.

We have pending patent approval's that might be vulnerable
One of the Company's most valuable assets is its intellectual property. The Company's intellectual property such as patents,

trademarks, copyrights, Internet domain names, and trade secrets may not be registered with the proper authorities. We believe one of the most valuable components of the Company is our intellectual property portfolio. Due to the value, competitors may misappropriate or violate the rights owned by the Company. The Company intends to continue to protect its intellectual property portfolio from such violations. It is important to note that unforeseeable costs associated with such practices may invade the capital of the Company due to its unregistered intellectual property.

Our trademarks, copyrights and other intellectual property could be unenforceable or ineffective
Intellectual property is a complex field of law in which few things are certain. It is possible that competitors will be able to design around our intellectual property, find prior art to invalidate it, or render the patents unenforceable through some other mechanism. If competitors are able to bypass our trademark and copyright protection without obtaining a sublicense, it is likely that the Company's value will be materially and adversely impacted. This could also impair the Company's ability to compete in the marketplace. Moreover, if our trademarks and copyrights are deemed unenforceable, the Company will almost certainly lose any potential revenue it might be able to raise by entering into sublicenses. This would cut off a significant potential revenue stream for the Company.

The cost of enforcing our trademarks and copyrights could prevent us from enforcing them
Trademark and copyright litigation has become extremely expensive. Even if we believe that a competitor is infringing on one or more of our trademarks or copyrights, we might choose not to file suit because we lack the cash to successfully prosecute a multi-year litigation with an uncertain outcome; or because we believe that the cost of enforcing our trademark(s) or copyright(s) outweighs the value of winning the suit in light of the risks and consequences of losing it; or for some other reason. Choosing not to enforce our trademark(s) or copyright(s) could have adverse consequences for the Company, including undermining the credibility of our intellectual property, reducing our ability to enter into sublicenses, and weakening our attempts to prevent competitors from entering the market. As a result, if we are unable to enforce our trademark(s) or copyright(s) because of the cost of enforcement, your investment in the Company could be significantly and adversely affected.

The loss of one or more of our key personnel, or our failure to attract and retain other highly qualified personnel in the future, could harm our business
Our business depends on our ability to attract, retain, and develop highly skilled and qualified employees. As we grow, we will need to continue to attract and hire additional employees in various areas, including sales, marketing, design, development, operations, finance, legal, and human resources. However, we may face competition for qualified candidates, and we cannot guarantee that we will be successful in recruiting or retaining suitable employees. Additionally, if we make hiring mistakes or fail to develop and train our employees adequately, it could have a negative impact on our business, financial condition, or operating results. We may also need to compete with other companies in our industry for highly skilled and qualified employees. If we are unable to attract and retain the right talent, it may impact our ability to execute our business plan successfully, which could adversely affect the value of your investment. Furthermore, the economic environment may affect our ability to hire qualified candidates, and we cannot predict whether we will be able to find the right employees when we need them. This would likely adversely impact the value of your investment.

Our ability to sell our product or service is dependent on outside government regulation which can be subject to change at any time
Our ability to sell our products is subject to various government regulations, including but not limited to, regulations related to the manufacturing, labeling, distribution, and sale of our products. Changes in these regulations, or the enactment of new regulations, could impact our ability to sell our products or increase our compliance costs. Furthermore, the regulatory landscape is subject to regular change, and we may face challenges in adapting to such changes, which could adversely affect our business, financial condition, or operating results. In addition to government regulations, we may also be subject to other laws and regulations related to our products, including intellectual property laws, data privacy laws, and consumer protection laws. Non-compliance with these laws and regulations could result in legal and financial liabilities, reputational damage, and regulatory fines and penalties. It is also possible that changes in public perception or cultural norms regarding our products may impact demand for our products, which could adversely affect our business and financial performance, which may adversely affect your investment.

We rely on third parties to provide services essential to the success of our business
Our business relies on a variety of third-party vendors and service providers, including but not limited to blood and tissue banks, manufacturers, shippers, accountants, lawyers, public relations firms, advertisers, and distributors. Our ability to maintain high quality operations and services depends on these third-party vendors and service providers, and any failure or delay in their performance could have a material adverse effect on our business, financial condition, and operating results. We may have limited control over the actions of these third-party vendors and service providers, and they may be subject to their own operational, financial, and reputational risks. We may also be subject to contractual or legal limitations in our ability to terminate relationships with these vendors or service providers or seek legal recourse for their actions. Additionally, we may face challenges in finding suitable replacements for these vendors and service providers, which could cause delays or disruptions to our operations. The loss of key or other critical vendors and service providers could materially and adversely affect our business, financial condition, and operating results, and as a result, your investment could be adversely impacted by our reliance on these third-party vendors and service providers.

The Company is vulnerable to hackers and cyber-attacks

As an internet-based business, we may face risks related to cybersecurity and data protection. We rely on technology systems to operate our business and store and process sensitive data, including the personal information of our investors. Any significant disruption or breach of our technology systems, or those of our third-party service providers, could result in unauthorized access to our systems and data, and compromise the security and privacy of our investors. Moreover, we may be subject to cyber-attacks or other malicious activities, such as hacking, phishing, or malware attacks, that could result in theft, loss, or destruction of our data, disruption of our operations, or damage to our reputation. We may also face legal and regulatory consequences, including fines, penalties, or litigation, in the event of a data breach or cyber-attack. Any significant disruption or downtime of our platform, whether caused by cyber-attacks, system failures, or other factors, could harm our reputation, reduce the attractiveness of our platform, and result in a loss of investors and issuer companies. Moreover, disruptions in the services of our technology provider or other third-party service providers could adversely impact our business operations and financial condition. This would likely adversely impact the value of your investment.

Economic and market conditions
The Company's business may be affected by economic and market conditions, including changes in interest rates, inflation, consumer demand, and competition, which could adversely affect the Company's business, financial condition, and operating results.

Force majeure events
The Company's operations may be affected by force majeure events, such as natural disasters, pandemics, acts of terrorism, war, or other unforeseeable events, which could disrupt the Company's business and operations and adversely affect its financial condition and operating results.

Adverse publicity
The Company's business may be negatively impacted by adverse publicity, negative reviews, or social media campaigns that could harm the Company's reputation, business, financial condition, and operating results.

Regulatory Compliance and Approval
Currently none of the company's products are subject to regulatory approval. However, should the company enter into therapeutic applications of its technologies, it would become subject to regulatory approval. . Obtaining regulatory approvals for therapeutic applications from bodies such as the FDA in the U.S. or the EMA in Europe can be a lengthy, uncertain, and costly process. Failure to obtain necessary approvals can delay or prevent the commercialization of therapeutic products.

Technological Changes and Innovation
Rapid advances in technology and science could render existing products or technologies obsolete. Companies must continuously invest in research and development to stay competitive, which is inherently risky and requires substantial capital.

Ethical and Legal Considerations
Stem cell research faces ethical, legal, and social scrutiny, which can influence regulatory policies and public acceptance. The company does not work with embryonic stem cells/material today, nor does it plan to in the future. However, changes in laws or negative public perception can impact the industry's growth and a company's operations.

Market Acceptance and Competition
Products based on new technologies must gain market acceptance to succeed. The industry is also highly competitive, with companies competing for limited research funding, partnerships, and market share.

Dependence on Key Products or Research Outcomes
If StemBioSys relies heavily on the success of a limited number of products or research projects, its financial viability could be at risk if those fail to progress or deliver expected outcomes.

Funding and Liquidity
StemBioSys's ability to continue operations, research, and product development may heavily depend on its ability to secure financing. Volatility in financial markets or changes in investor sentiment can adversely affect funding availability.

Partnerships and Licensing
The development and commercialization of biotechnology products often depend on strategic partnerships. Failure to establish or maintain these relationships, or disputes within these partnerships, can impact product development and market access.

Licensing Agreements
The terms of our licensing agreements, including the perpetual exclusive license for which we pay an annual fee, are subject to renegotiation and renewal terms. Changes in these agreements or their termination could adversely affect our ability to utilize essential technologies and, by extension, our product development and commercialization efforts.

Intellectual Property Rights Protection:
The strength and breadth of our IP protection are crucial. Any failure to adequately protect our patents, whether through enforcement challenges, legal limitations, or administrative hurdles in the jurisdictions we operate, could expose us to

competition and affect our market position and profitability.

Patent Litigation
The biotechnology and stem cell research fields are characterized by frequent and often complex patent litigation. Defending against infringement claims, or asserting our own rights, can be prohibitively expensive and distract management from our core business. Adverse outcomes in such litigations could result in significant financial liabilities or loss of proprietary rights.

International IP Risks
Our operations in multiple jurisdictions—each with its own legal and regulatory frameworks for IP—compound these risks. Variations in the enforceability of patents, differences in the duration of protection, or challenges in defending IP rights in certain countries can limit our ability to compete globally.

Dependence on Key Technologies
Our reliance on the specific technologies covered by our owned and licensed patents means any obsolescence, bypassing, or improvement upon these technologies by competitors could diminish the value of our IP and adversely impact our competitive position and financial performance.

We have a limited operating history and have incurred significant losses since inception that we expect to continue for the foreseeable future.
We have a limited operating history and have incurred significant and increasing losses in each fiscal year since our inception, including a $0.6 million gain in 2022 (primarily due to a $2.3 million gain on sale of a subsidiary, and a net lossof ~$1.3 million during 2023, respectively. The losses have resulted principally from costs incurred in our research and development programs and from our sales and marketing and general and administrative expenses. We expect to continue to incur operating and net losses and negative cash flow from operations, which may increase, for the foreseeable future due in part to anticipated increases in expenses for research and product development and significant expansion of our sales and marketing activities. We anticipate that our business will generate operating losses until sales from our products begin to generate significant additional revenues to support our level of operating expenses. Because of the numerous risks and uncertainties associated with our commercialization efforts and future product development, we are unable to predict when we will become profitable, and we may never become profitable. Even if we do achieve profitability, we may not be able to sustain or increase our profitability.

If our products fail to achieve and sustain sufficient market acceptance, our revenue will be adversely affected.
Our success depends, in part, on our ability to develop and market products that are recognized and accepted as expanding high quality stem cells, cell lines useful in the research market and/or technologies that have beneficial therapeutic or diagnostic applications. Most of our customers already use long established models for research and testing in their laboratories and may be reluctant to replace those models. Market acceptance of our products will depend on many factors, including the price of our products relative to alternative models and our ability to convince potential customers that our products are an attractive alternative to existing models. Compared to most competing models, use of our CELLvo Matrix, Cells and Media products in testing and research is relatively new, and most potential customers

Our revenue depends on production of a small group of products.
We plan to generate revenue from sales of our proprietary CELLvo Matrix which is a patented technology used to isolate, and expand stem cell populations by creating a natural environment in which target cell populations prosper along with cell lines and related products developed using the CELLvo technology. There is no assurance that we will generate revenues from these products, or any products under development, in the future. Our success is highly dependent on market acceptance of our products, which is uncertain. Because we are dependent on a small group of products, factors such as changes in customer preferences and specifications and general market conditions in our industry may have a significant impact on us. If the demand for our products fails to grow, develops more slowly than expected, decreases in response to customer preferences or new specifications that we are unable to satisfy or if the market becomes saturated with competing products, then our business, financial condition and results of operation will be materially adversely affected.

Our future success is dependent upon our ability to expand our customer base and introduce new products.
Our customer base is primarily composed of biopharmaceutical companies, government research institutions, academic and nonprofit research institutions, clinical research organizations and stem cell banks that use our products to perform analyses for research and commercial purposes. Our success will depend in part upon our ability to increase our sales to these core customers, attract additional customers outside of these markets and market new products to existing and new customers as we develop such products. Attracting new customers and introducing new products requires substantial time and expense. Any failure to expand sales to our existing customer base, attract new customers or launch new products would adversely affect our ability to generate or increase our revenues.

Our sales cycles can be lengthy and variable, which can it difficult for us to forecast revenue and other operating results.
The lengthy and variable sales cycles for our CELLvo Matrix and related cell line products make it difficult for us to accurately forecast revenues in a given period, and may cause revenue and operating results to vary significantly from period to period. This variability can result in significant swings in our financial performance particularly when looking at month to month performance. Due in part to the novelty of our products and the implications for established research and testing models, potential customers for our products typically need to commit significant time and resources to evaluate

our technology, and their decision to purchase our products may be further limited by budgetary constraints and several layers of internal review and approval, which are beyond our control. In addition, the novelty and complexity of our product often require us to spend substantial time and effort assisting potential customers in learning to use and evaluating our products, including providing demonstrations and benchmarking our products against other available research and testing models. As a result of these factors, our sales cycle has varied widely and, in certain instances, has been longer than 12 months. The complexity and variability of our sales cycle has made it difficult for us to accurately project quarterly and annual revenues, and we have frequently failed to meet our internal quarterly and annual projections. We expect that our sales will continue to fluctuate on a quarterly basis and that our financial results for some periods may be below those projected. Such fluctuations could have a material adverse effect on our business and on the value of our Company. New market opportunities may not develop as quickly as we expect.

New market opportunities may not develop as quickly as we expect.
The application of human cell biology to drug and chemical safety and toxicology, drug discovery and disease research and cell therapy are new market opportunities. We believe these opportunities will take several years to develop or mature, and we cannot be certain that these market opportunities will develop as we expect. Although we believe that there will be applications for our technologies in these markets, there can be no certainty of the technical or commercial success our technologies will achieve in such markets. Our success in these markets may depend to a large extent on our ability to successfully demonstrate the efficacy of our products relative to existing research and testing models.

Cardiac toxicity testing and drug screen technology may fail in development and/or fail to gain market acceptance.
To remain competitive and increase revenues we must successfully develop and commercialize technologies based upon our core matrix technology that solve unique problems in industry and deliver value added solutions which our potential customers will purchase at prices allowing for acceptable gross margins. If these products fail in development and/or do not gain market acceptance our business may be adversely affected.

We may decide to invest in new products for which there proves to be no demand.
To remain competitive and increase revenue, we must retain, increase and engage our customer base, which will depend heavily upon our ability to create successful, new products, both independently and in conjunction with third parties. We may introduce new and unproven products, including products with which we have little or no prior experience. If new or enhanced products fail to prove useful to customers or if we misinterpret trends, underestimate development costs and/or pursue the wrong products, we may fail to generate sufficient revenue, operating margin or other value to justify our investments, and our business may be adversely affected.

Our research and product development efforts may not result in commercially viable products within the timeline anticipated, if at all.
We intend to devote significant personnel and financial resources to research and development activities designed to expand our CELLvo Matrix technology and develop follow on and related cell line products. Our technology is new and complex and the time and resources necessary to develop new therapeutic or research products are difficult to predict in advance. Any delay or failure by us to develop new products would have a substantial adverse effect on our business and results of operations.

Our products may not be meaningfully more useful or effective in research or therapeutic applications than existing products.
Our products may fail to provide a meaningful difference over existing or new products in research, therapeutics and other applications and, as a result, may not meaningfully displace such products. Failure to achieve market acceptance would limit our ability to generate revenue and would have a material adverse effect on our business.

If we are unable to keep up with rapid technological changes in our field or compete effectively, we will be unable to operate profitably.
We are engaged in activities in the life sciences field, which is characterized by rapid technological changes, frequent new product introductions, changing customer needs and preferences, emerging competition, evolving industry standards and strong price competition. If we fail to anticipate or respond adequately to technological developments, demand for our products will not grow and may decline, and our business, revenue, financial condition and operating results could suffer materially. We cannot assure you that research and discoveries by other companies will not render our existing or potential products uneconomical or result in products superior to those we develop. We also cannot assure you that any technologies or products that we develop will be preferred to any existing or newly developed technologies or products.

We anticipate that we will face increased competition in the future as existing companies and competitors develop new or improved products and as new companies enter the market with new technologies.
Competitors may have significant financial, manufacturing, sales and marketing resources and may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards or customer requirements. In addition, our competitors may enter into collaborative relationships with our current or potential customers that may provide those competitors with access to greater financial and development resources than we have and opportunities to establish market leading positions. In light of these advantages, even if our technology is more effective than the product offerings of our competitors, current or potential customers might accept competitive products or develop their own products in lieu of purchasing our products. We may not be able to compete effectively against these organizations.

Increased competition is likely to result in pricing pressures, which could harm our sales, profitability or market share. Our failure to compete effectively could materially and adversely affect our business, financial condition and results of operations.

We have limited experience in marketing, selling and distributing our products, and we need to expand our marketing force and distribution capabilities for our products to gain market acceptance.
We have limited experience in marketing and distributing our product. Our BM-HPME (now marketed as CELLvo Matrix) product was first launched in August 2015. We may not be able to market and distribute our products effectively enough to support our planned growth. We currently sell our product primarily through our own marketing efforts, and have plans to engage (see next risk factor) distributors to assist in the marketing of our products. Our future sales will depend in large part on our ability to develop and substantially expand our marketing efforts and incent our distributors to promote our products. Our products are technically complex and used for highly specialized applications. As a result, we believe it is necessary to develop a marketing group with technical sophistication. Competition for such employees is intense. We may not be able to attract and retain personnel or be able to build an efficient and effective marketing force, which could negatively impact sales of our products, and reduce our revenues and profitability.

Our product distributors may perform below our expectations and/or not at all.
We have engaged and are depending on a variety of distributors to market, sell and distribute our products. We depend on the expertise, connections and competence of these distributors to gain market traction and drive sales of our products into the market place. Our future sales will depend in part on the ability of our distributors to effectively market our products to target customers. Our products are complex and new to the research products market place, and it is uncertain if our distributors will be successful in selling our products at the levels that we anticipate. Failure on the part of our distributors and their sales representatives to sell our products at the levels that we anticipate will have an adverse impact on our product revenues and materially impact our business operations.

Our co-development partners may perform below our expectations and/or not at all.
We may enter into collaborative arrangements to co-develop future cell line related products for sale in the research market. In such a case, We would be dependent upon the performance, know how, and capabilities of these co development partners to successfully develop and launch future products into the commercial market. The performance of these co-development partners is outside of our control, and performance below our expectations could lead to delayed product launches, reduced revenue realization, and our failure to bring new products to market as planned. Additionally, co-development partners could become distracted by other business opportunities and/or terminate agreements with us to develop new products which would be detrimental to the Company. It is possible that future grants and/or revenues from collaborations may fail to materialize. Failure to achieve these grant, collaboration and co-development revenue goals would have a material negative impact on our profitability, and could lead to the need to seek additional funding.

We may experience difficulty in manufacturing our products.
Manufacturing CELLvo Matrix and related products using CELLvo technology involves technically complex processes. We have developed protocols for the manufacture of CELLvo Matrix, cell lines and media. We may encounter difficulties in manufacturing CELLvo products from particular donor samples or differentiated cell types, even when following these protocols. These difficulties may result in delays in production and customer fulfillment, loss of revenue and reputational harm.

Due to heavy reliance on manufacturing and related operations to produce, package and distribute our products, our business could be adversely affected by disruptions of these operations.
We rely upon our manufacturing operations to produce products accounting for all of our sales. Our quality control, packaging and distribution operations support all of our sales. Any significant disruption of those operations for any reason, such as labor unrest, power interruptions, fire or other events beyond our control, could adversely affect our sales and customer relationships and, therefore, adversely affect our business. While insurance coverage may reimburse us, in whole or in part, for profits lost from such disruptions, our inability to meet customer expectations in providing these products may affect our sales growth expectations and results.

If we experience a significant disruption in our information technology systems or if we fail to implement new systems and software successfully, our business could be adversely affected.
We depend on information systems to control our manufacturing and quality processes, process orders, manage inventory, process and bill shipments, collect payment from our customers, respond to customer inquiries, contribute to our overall internal control processes, maintain records of our property, plant and equipment, and record and pay amounts due vendors and other creditors. Our systems could be subject to viruses, break-ins, sabotage, acts of terrorism, acts of vandalism, hacking, cyber-terrorism and similar misconduct. If we were to experience a prolonged disruption in our information systems that involve interactions with customers and suppliers, it could result in the loss of sales and customers and/or increased costs, which could adversely affect our business.

Our business depends on research and development spending levels of biopharmaceutical companies, government research institutions, academic and nonprofit research institutions, clinical research organizations and stem cell banks, and any reduction in such spending could limit our ability to sell our products.
We expect that our revenue in the foreseeable future will be derived primarily from sales of our CELLvo products to

biopharmaceutical companies, government research institutions, academic and nonprofit research institutions, clinical research organizations and stem cell banks in the United States, Europe and Asia. Our success will depend upon their demand for and use of our products. Accordingly, the spending policies of these customers could have a significant effect on the demand for our technology. These policies may be based on a wide variety of factors, including the resources available to make purchases, policies regarding spending during recessionary periods and changes in the political climate. In addition, academic, governmental and other research institutions that fund research and development activities may be subject to stringent budgetary constraints that could result in spending reductions, reduced allocations or budget cutbacks, which could jeopardize the ability of these customers to purchase our products. Our operating results may fluctuate substantially due to reductions and delays in research and development expenditures by these customers. For example, reductions in expenditures by these customers may result in lower than expected sales of our products. These reductions and delays may result from factors that are not within our control, such as: • changes in economic conditions; • changes in government programs that provide funding to research institutions and companies; • changes in the regulatory environment affecting biopharmaceutical companies engaged in research and commercial activities; • differences in budget cycles across various governmental entities and industries; • market-driven pressures on companies to consolidate operations and reduce costs; • mergers and acquisitions in the biopharmaceutical and life sciences industries; and • other factors affecting research and development spending. Any decrease in our customers' budgets or expenditures or in the size, scope or frequency of operating expenditures as a result of the foregoing or other factors could materially and adversely affect our operations or financial condition. We may rely on strategic collaborations for research and development and commercialization purposes. We have entered into and may continue to enter into strategic collaborations, which we sometimes refer to as material transfer agreements, with biopharmaceutical companies, academic institutions and life science research institutions. For example, we are currently involved in approximately four collaboration projects with potential strategic partners. If any of our strategic collaboration participants were to change their business strategies or development priorities, or encounter research and development obstacles, they may no longer be willing or able to participate in such strategic collaborations, which could have a material adverse effect on our product development. In addition, we may not control the strategic collaborations in which we participate. We may be required to relinquish or license important rights, including intellectual property rights, and relinquish or share control over the development of the products during the collaboration, or otherwise be subject to terms unfavorable to us. Our material transfer agreements are subject to numerous conditions, contingencies, development challenges, milestones, indemnification obligations, termination rights and default provisions. There can be no assurance that these collaborations will lead to technology or products, that any such technology or products will receive market acceptance, that we will realize any material revenue or other benefits from these collaborations or that the benefits will exceed our costs.

Our business depends on research and development spending levels of biopharmaceutical companies, government research institutions, academic and nonprofit research institutions, clinical research organizations and stem cell banks, and any reduction in such spending could limit our ability to sell our products.
We expect that our revenue in the foreseeable future will be derived primarily from sales of our CELLvo products to biopharmaceutical companies, government research institutions, academic and nonprofit research institutions, clinical research organizations and stem cell banks in the United States, Europe and Asia. Our success will depend upon their demand for and use of our products. Accordingly, the spending policies of these customers could have a significant effect on the demand for our technology. These policies may be based on a wide variety of factors, including the resources available to make purchases, policies regarding spending during recessionary periods and changes in the political climate. In addition, academic, governmental and other research institutions that fund research and development activities may be subject to stringent budgetary constraints that could result in spending reductions, reduced allocations or budget cutbacks, which could jeopardize the ability of these customers to purchase our products. Our operating results may fluctuate substantially due to reductions and delays in research and development expenditures by these customers. For example, reductions in expenditures by these customers may result in lower than expected sales of our products. These reductions and delays may result from factors that are not within our control, such as: • changes in economic conditions; • changes in government programs that provide funding to research institutions and companies; • changes in the regulatory environment affecting biopharmaceutical companies engaged in research and commercial activities; • differences in budget cycles across various governmental entities and industries; • market-driven pressures on companies to consolidate operations and reduce costs; • mergers and acquisitions in the biopharmaceutical and life sciences industries; and • other factors affecting research and development spending. Any decrease in our customers' budgets or expenditures or in the size, scope or frequency of operating expenditures as a result of the foregoing or other factors could materially and adversely affect our operations or financial condition. We may rely on strategic collaborations for research and development and commercialization purposes. We have entered into and may continue to enter into strategic collaborations, which we sometimes refer to as material transfer agreements, with biopharmaceutical companies, academic institutions and life science research institutions. For example, we are currently involved in approximately four collaboration projects with potential strategic partners. If any of our strategic collaboration participants were to change their business strategies or development priorities, or encounter research and development obstacles, they may no longer be willing or able to participate in such strategic collaborations, which could have a material adverse effect on our product development. In addition, we may not control the strategic collaborations in which we participate. We may be required to relinquish or license important rights, including intellectual property rights, and relinquish or share control over the development of the products during the collaboration, or otherwise be subject to terms unfavorable to us. Our material transfer agreements are subject to numerous conditions, contingencies, development challenges, milestones, indemnification obligations, termination rights and default provisions. There can be no assurance that these collaborations will lead to technology or

products, that any such technology or products will receive market acceptance, that we will realize any material revenue or other benefits from these collaborations or that the benefits will exceed our costs.

Our future capital needs are uncertain and we may need to raise additional funds in the future
We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, and forecasted revenue from product sales will be sufficient to meet our anticipated cash requirements for at least the next 24 months. However, we may need to raise substantial additional capital to: • expand the commercialization of our products; • assess and further develop collaboration opportunities; • fund our operations; and • further our research and development. Our future funding requirements will depend on many factors, including: • market acceptance of our products; • the cost of our research and development activities; • the cost of acquiring and maintaining the intellectual property necessary to preserve our freedom to operate in the stem cell industry; • the cost of defending, in litigation or otherwise, any claims that we infringe third-party patents or violate other intellectual property rights; • the cost and timing of regulatory clearances or approvals, if any; • the cost and timing of establishing additional sales, marketing and distribution capabilities; • the cost and timing of establishing additional technical support capabilities; • the effect of competing technological and market developments; and • the extent to which we acquire or invest in businesses, products and technologies, although we currently have no commitments or agreements relating to any of these types of transactions. We cannot assure you that we will be able to obtain additional funds on acceptable terms, or at all. If we raise additional funds by issuing equity securities, our shareholders may experience dilution. Debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any debt or additional equity financing that we raise may contain terms that are not favorable to us or to our shareholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products, or grant licenses on terms that are not favorable to us. If we are unable to raise adequate funds, we may have to liquidate some or all of our assets, or delay, reduce the scope of or eliminate some or all of our research and development programs.

If we cannot provide quality technical support, we could lose customers and our operating results could suffer.
The adoption of our products by our customers and ongoing customer support can be complex. Accordingly, we need highly trained technical support personnel. Hiring technical support personnel is very competitive in our industry due to the limited number of people available with the necessary scientific background and ability to understand our products at a technical level. To effectively support potential new customers and the expanding needs of current customers, we will need to substantially expand our technical support staff. If we are unable to attract, train or retain the number of highly qualified technical services personnel that our business needs, our business and prospects will suffer.

If we are unable to recruit and retain key executives and highly skilled employees, we may be unable to achieve our goals.
Our performance is substantially dependent on the performance of our senior management. We do not maintain fixed term employment contracts with any of our employees. The loss of the services of any member of our senior management might significantly delay or prevent the development of our products or achievement of other business objectives by diverting management's attention to transition matters and identification of suitable replacements, if any, and could have a material adverse effect on our business. We do not maintain significant key man life insurance on any of our employees. In addition, our research and product development efforts could be delayed or curtailed if we are unable to attract, train and retain highly skilled employees, particularly senior scientists. To expand our research and product development efforts, we need additional people skilled in areas such as molecular and cellular biology and manufacturing. Competition for these people is intense. Because of the complex and technical nature of our product and the dynamic market in which we compete, any failure to attract and retain a sufficient number of qualified employees could materially harm our ability to develop and commercialize our technology.

Adverse conditions in the global economy and disruption of financial markets may significantly harm our revenue, profitability and results of operations.
The global economy has been experiencing significant economic volatility, and global credit and capital markets have experienced substantial volatility and disruption. Volatility and disruption of financial markets could limit our customers' ability to obtain adequate financing or credit to purchase and pay for our products in a timely manner or to maintain operations, which could result in a decrease in sales volume that could harm our results of operations. General concerns about the fundamental soundness of domestic and international economies may also cause our customers to reduce their purchases. Changes in governmental banking, monetary and fiscal policies to address liquidity and increase credit availability may not be effective. Significant government investment and allocation of resources to assist the economic recovery of sectors that do not include our customers may reduce the resources available for government grants and related funding for life science research and development. Continuation or further deterioration of these financial and macroeconomic conditions could significantly harm our sales, profitability and results of operations.

Our business is subject to complex and evolving laws and regulations regarding privacy and informed consent matters. Many of these laws and regulations are subject to change and uncertain interpretation, and could result in claims, changes to our business practices, increased cost of operations or otherwise harm our company.
We are subject to a variety of laws and regulations in the United States and abroad that involve matters central to our business, including obligations to seek informed consent from donors for the use of their blood and other tissue as well as state and federal laws that protect the privacy of donors. U.S. federal and state and foreign laws and regulations are constantly evolving and can be subject to significant change. When we engage in business in markets in countries other than the United States, we may become subject to foreign laws and regulations relating to human subjects research and

other laws and regulations that are often more restrictive than those in the United States. In addition, the application and interpretation of these laws and regulations are often uncertain, particularly in the new and rapidly evolving industry in which we operate. These laws and regulations can be costly to comply with and can delay or impede the development of new products, result in negative publicity, increase our operating costs, require significant management time and attention and subject us to claims or other remedies, including fines or demands that we modify or cease existing business practices.

Our business in markets outside of the United States is subject to political, economic, legal and social risks, which could adversely affect our business.
When we engage in business in countries other than the United States, we may become subject to the burden of complying with a wide variety of national and local laws, including multiple and possibly overlapping and conflicting laws. We may also experience difficulties adapting to new cultures, business customs and legal systems. Any sales and operations outside of the United States would be subject to political, economic and social uncertainties including, among others: • changes and limits in import and export controls; • increases in custom duties and tariffs; • changes in currency exchange rates; • economic and political instability; • changes in government regulations and laws; • absence in some jurisdictions of effective laws to protect our intellectual property rights; and • currency transfer and other restrictions and regulations that may limit our ability to sell certain products or repatriate profits to the United States. Any changes related to these and other factors could adversely affect our business in markets outside of the United States.

Demand for our technology could be reduced by legal, social and ethical concerns surrounding the manufacture of biological materials.
Our products involve the use and manipulation of tissue from humans. Our products could be used in a variety of applications, which may have underlying legal, social and ethical concerns, including the genetic engineering or modification of human cells, testing for genetic predisposition for certain medical conditions and stem cell banking. Governmental authorities could, for safety, social or other purposes, call for limits on or impose regulations on the use of genetic testing or the manufacture or use of certain biological materials. Such concerns or governmental restrictions could limit the use of our products, which could have a material adverse effect on our business, financial condition and results of operations.

Our products, although not currently subject to regulation by the U.S. Food and Drug Administration or other regulatory agencies as biological products or drugs, could become subject to regulation in the future.
Our current products are currently labeled and sold to biopharmaceutical companies, government research institutions, academic and nonprofit research institutions, medical research organizations and stem cell banks for research purposes only, and not therapeutic procedures. As research use only products, they are not subject to regulation as biological products or drugs by the U.S. Food and Drug Administration (FDA) or comparable agencies of other countries. However, if we change the labeling of our products in the future to include therapeutic applications and/or develop therapeutic uses, our products or related applications could be subject to the FDA's pre- and post-market regulations. For example, if we wish to label and market our products for use in performing cell therapy or regenerative medicine, such as tissue engineering or organ replacement, we would first need to obtain FDA premarket clearance or approval. Obtaining FDA clearance or approval can be expensive and uncertain, generally takes several months to years to obtain, and may require detailed and comprehensive scientific and clinical data. Notwithstanding the expense, these efforts may never result in FDA approval or clearance. Even if we were to obtain regulatory approval or clearance, it may not be for the uses that we believe are important or commercially attractive.

Finally, we may be required to proactively achieve compliance with certain FDA regulations as part of our contracts with customers or as part of our collaborations with third parties.
In addition, we may voluntarily seek to conform our manufacturing operations to the FDA's current good manufacturing practices for biological and drug products, known as the Quality System Regulation (QSR) or FDA's Good Tissue Practices for human cell and tissue-based products. The QSR is a complex regulatory scheme that governs the methods and documentation covering the design, testing, control, manufacturing, labeling, quality assurance, packaging, storage and shipping of products. The FDA enforces the QSR through periodic unannounced inspections of registered manufacturing facilities. The failure to take satisfactory corrective action in response to an adverse QSR inspection could result in enforcement actions, including a public warning letter, a shutdown of manufacturing operations, a product recall, civil or criminal penalties or other sanctions, which could in turn cause our sales and business to suffer. FDA's Good Tissue Practices create regulatory requirements for establishments that manufacture human cells, tissues and cellular and tissue-based products (HCT/Ps) and to establish donor-eligibility, current good tissue practice and other procedures to prevent the introduction, transmission and spread of communicable diseases by HCT/Ps. The FDA has the authority to inspect such establishments and take enforcement action including ordering a manufacturing stoppage if it finds sufficient regulatory violations. See "Business–Government regulation."

Bacterial or viral contamination of our production suites may damage our reputation and otherwise harm our business.
Laboratories that work with human tissue are subject to bacterial or viral contamination. If our procedures for preventing this type of contamination fail, our production suite may become contaminated. In that event, we would need to cease production in the affected suite to eliminate the contamination, during which time we would be required to rely on our inventory to fulfill customer orders. If our inventories and remaining production capacity are not sufficient to satisfy customer demand, we may lose product orders, which would harm our results of operations. Furthermore, if our products become bacterially or virally contaminated and as a result contaminated products are shipped to our customers, those

products may contaminate our customers' laboratories. Such contamination could harm our reputation among our customers and potential customers.

Our products could have unknown defects or errors, which may give rise to claims against us and adversely affect market adoption of our systems.
We use novel and complex technology to manufacture our products and such products may develop or contain undetected defects or errors. We cannot assure you that material performance problems, defects or errors will not arise. We provide limited express warranties that certain of our products will meet certain specifications to foster continued customer adoption and use of our systems. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our business. If our products contain defects, we may experience: • a failure to achieve market acceptance or expansion of our product sales; • loss of customer orders and delay in order fulfillment; • damage to our brand reputation; • increased cost of our warranty program due to product replacement; • product recalls or replacements; • inability to attract new customers; • diversion of resources from our manufacturing and research and development into our customer services and support; and • legal claims against us, including product liability claims, which could be costly and time consuming to defend and result in substantial damages. The occurrence of any one or more of the foregoing could negatively affect our business, financial condition and results of operations.

We utilize certain technologies that are licensed to us. If we are unable to maintain these licenses, our business could be adversely affected.
We currently use certain licensed technologies to make the products that are material to our business, including our core CELLvo technologies, and we may enter into additional license agreements in the future. Our rights to use such licensed technologies are subject to the negotiation of, continuation of and compliance with the terms of the applicable licenses, including payment of any royalties and diligence, insurance, indemnification and other obligations. Our license rights are further subject to the validity of the owner's intellectual property rights. We cannot be certain that drafting and/or prosecution of the licensed patents and patent applications by the licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights. Legal action could be initiated by or against the owners of the intellectual property that we license. Even if we are not a party to these legal actions, an adverse outcome could harm our business because it might prevent these other companies or institutions from continuing to license intellectual property that we may need to operate our business. In some cases, we do not control the prosecution, maintenance or filing of the patents to which we hold licenses, or the enforcement of these patents against third parties. Certain of our license agreements are subject to termination by the licensor in specific circumstances. Any such termination of these licenses could prevent us from producing, selling or marketing some or all of our products. Because of the complexity of our products and the patents we have licensed, determining the scope of the license and related royalty obligation can be difficult and can lead to disputes between us and the licensor. An unfavorable resolution of such a dispute could lead to an increase in the royalties payable pursuant to the license. If a licensor believed we were not paying the royalties due under the license or were otherwise not in compliance with the terms of the license, the licensor might attempt to revoke the license. If such an attempt were successful, our business could be adversely affected. We engage in discussions regarding possible commercial, licensing and cross-licensing agreements with third parties from time to time. There can be no assurance that these discussions will lead to the execution of commercial license or cross-license agreements or that such agreements will be on terms that are favorable to us. If these discussions are successful, we could be obligated to pay license fees and royalties to such third parties. If these discussions do not lead to the execution of mutually acceptable agreements, we may be limited or prevented from producing and selling our existing products and developing new products. One or more of the parties involved in such discussions could resort to litigation to protect or enforce its patents and proprietary rights or to determine the scope, coverage and validity of the proprietary rights of others. In addition, if we enter into cross-licensing agreements, there is no assurance that we will be able to effectively compete against others who are licensed under our patents.

Our ability to protect our intellectual property and proprietary technology through patents and other means is uncertain.
Our commercial success depends in part on our ability to protect our intellectual property and proprietary technologies. We rely on patents, where appropriate and available, as well as a combination of copyright, trade secret and trademark laws, license agreements and nondisclosure, confidentiality and other contractual restrictions to protect our proprietary technology. However, these legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. Pending patent applications of ours or our licensors may not issue as patents or may not issue in a form that will be sufficient to protect our proprietary technology and gain or maintain our competitive advantage. Any patents we have obtained or may obtain in the future, or the rights we have licensed, may be subject to re-examination, reissue, opposition or other administrative proceeding, or may be challenged in litigation, and such challenges could result in a determination that the patent is invalid or unenforceable. In addition, competitors may be able to design alternative methods or products that avoid infringement of these patents or technologies. To the extent our intellectual property, including licensed intellectual property, offers inadequate protection, or is found to be invalid or unenforceable, we are exposed to a greater risk of direct competition. If our intellectual property does not provide adequate protection against our competitors' products, our competitive position could be adversely affected, as could our business. Both the patent application process and the process of managing patent disputes can be time consuming and expensive. The patent positions of companies in the life sciences industry can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. A number of life sciences, biopharmaceutical and other companies, universities and research institutions have filed patent applications or have been issued patents relating

to cell therapy, stem cells, use of stem cells and other modified cells to treat disease, disorder or injury, and other technologies potentially relevant to or required by our existing and planned products. We cannot predict which, if any, of such pending applications will issue as patents or the claims that might be allowed. No consistent policy regarding the breadth of claims allowed in life sciences patents has emerged to date in the United States. The laws of some non-U.S. countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to prevent the infringement of our patents. Proceedings to enforce our intellectual property rights could result in substantial cost and divert our efforts and attention from other aspects of our business and we may not prevail. Changes in either the patent laws or in interpretations of patent laws in the United States or in other countries may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example: • We or our licensors might not have been the first to make the inventions covered by each of our owned or licensed pending patent applications; • We or our licensors might not have been the first to file patent applications for these inventions; • Others may independently develop similar or alternative products and technologies or new methods that are outside the scope of our patents; • It is possible that none of our owned or licensed pending patent applications will result in issued patents, and even if they issue as patents, they may not provide a basis for commercially viable products, they may not provide us with any competitive advantages, or they may be challenged and invalidated by third parties; • We may not develop additional proprietary products and technologies that are patentable; • The patents of others may have an adverse effect on our business; and • We apply for patents or seek licenses covering our products and technologies and uses thereof, as we deem appropriate. However, we may fail to apply for patents or obtain licenses on important products and technologies in a timely fashion or at all.

Certain of our technology may not be eligible for patent protection, which leaves us vulnerable to theft of the technology we protect under trade secret law.
We take steps to protect such intellectual property and proprietary technology, including by limiting access to the materials embodying such intellectual property and by entering into confidentiality agreements and intellectual property assignment agreements with our employees, consultants, collaborators and, when needed, our advisors. Such agreements may not be enforceable or may not provide meaningful protection or adequate remedies in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure. Monitoring unauthorized disclosure is difficult, and we cannot ensure that the steps we have taken to prevent such disclosure are, or will be, adequate. In addition, courts outside the United States may be less willing or unwilling to protect trade secrets. Further, others may independently discover or invent trade secrets and proprietary information similar to ours, and in such cases we could not assert any trade secret rights against such party.

Lawsuits
We may be involved in lawsuits to protect or enforce our patents and proprietary rights, to determine the scope, coverage and validity of others' proprietary rights or to defend against third party claims of intellectual property infringement, which in each case could require us to spend significant time and money and could prevent us from selling our products or impact the value of our business.

Litigation or other proceedings may be necessary for us to enforce our patent and proprietary rights and/or to determine the scope, coverage and validity of others' proprietary rights.
To determine the priority of inventions, which is determinative of patent rights, we may have to initiate and participate in interference proceedings declared by the U.S. Patent and Trademark Office that could result in substantial legal fees and could substantially affect the scope of our patent protection. Also, our intellectual property may be subject to significant administrative and litigation proceedings such as invalidity, unenforceability, re examination or opposition proceedings against our patents; we cannot be certain that we do not and will not infringe on the intellectual property rights of others. The outcome of any litigation or other proceeding is inherently uncertain and might not be favorable to us, and we might not be able to obtain licenses to technology that we require. Even if such licenses are obtainable, they may not be available at a reasonable cost or on otherwise favorable terms. We could therefore incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our gross margins. Further, we could encounter delays in product introductions, or interruptions in product sales, as we develop alternative methods or products.

In addition, if we resort to legal proceedings to enforce our intellectual property rights or to determine the validity, scope and coverage of the intellectual property or other proprietary rights of others, the proceedings could be burdensome and expensive, even if we were to prevail.
Our commercial success may depend in part on our non-infringement of the patents or proprietary rights of third parties. Numerous significant intellectual property issues have been litigated, and will likely continue to be litigated, between existing and new participants in the stem cell market, and competitors may assert that our products infringe their intellectual property rights as part of a business strategy to impede our successful entry into those markets. Third parties may assert that we are employing their proprietary technology without authorization. In addition, our competitors and others may have patents or may in the future obtain patents that broadly apply to the manufacture of human cells and their uses and claim that the manufacture or use of our products infringes these patents. As we move into new markets and applications for our products, incumbent participants in such markets may assert their patents and other proprietary rights

against us as a means of slowing our entry into such markets or as a means to extract substantial license and royalty payments from us.

Patent infringement suits can be expensive, lengthy and disruptive to business operations. We could incur substantial costs and divert the attention of our management and technical personnel in prosecuting or defending against any claims, and these claims may harm our reputation. There can be no assurance that we will prevail in any suit. Furthermore, parties making claims against us may be able to obtain injunctive or other relief, which could block our ability to develop, commercialize and sell products, and could result in the award of substantial damages against us, including treble damages and attorneys' fees and costs in the event that we are found to be a willful infringer of third party patents.
In the event of a successful claim of infringement against us, we may be required to obtain one or more licenses from third parties, which we may not be able to obtain at a reasonable cost or on otherwise favorable terms, if at all. In addition, we could encounter delays in product introductions while we attempt to develop alternative methods or products to avoid infringing third-party patents or proprietary rights. Defense of any lawsuit or failure to obtain any required licenses on favorable terms could prevent us from commercializing our products, and the risk of a prohibition on the sale of any of our products could adversely affect our ability to grow and gain market acceptance for our products. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If these results are perceived to be negative, it could have a substantial adverse effect on the value of our business. In addition, our agreements with some of our suppliers, distributors, customers and other entities with whom we do business may require us to defend or indemnify these parties to the extent they become involved in infringement claims against us, including the claims described above. We could also voluntarily agree to defend or indemnify third parties in instances where we are not obligated to do so if we determine that it would be important to our business relationships. If we are required or agree to defend or indemnify any of these third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, operating results or financial condition.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of our employees' former employers.
Many of our employees were previously employed at biopharmaceutical companies, including our competitors or potential competitors, and certain of these employees may have executed invention assignments, nondisclosure agreements and/or non-competition agreements in connection with such previous employment. Although no claims against us are currently pending, we may be subject to claims that we, or these employees, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property or personnel. A loss of key research personnel or their work product could hamper or prevent our ability to commercialize certain potential products, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

Risks related to our Series C Preferred Stock and this offering and our Outstanding Debt Forward looking statements may not be accurate.
This Memorandum contains forward-looking statements and reflects the Company's current views of future economic circumstances, industry conditions, Company performance and financial results. This forward-looking Memorandum is subject to a number of factors and uncertainties, which could cause the Company's actual results and experience to materially differ from anticipated results and expectations expressed in such forward-looking statements.

Financial forecasts
Certain estimates and projections of operations are contained herein. Because these estimates and projections are based on a number of assumptions and are subject to significant uncertainties and contingencies, many of which will be beyond the Company's control, there is no assurance that they will be realized and actual results may vary significantly from those shown. Prospective investors should conduct their own investigation and independent assessment of the estimates, projections, and other information set forth herein. The Company may be unable to achieve marketing and sales activities or establish third party collaborations or arrangements sufficient to generate profitable operations. The UTHSC License Agreement provides for milestones and deadlines for the completion of certain studies, clinical trials and approvals. Failure to timely meet any milestones or deadlines could result in the imposition of certain fees payable by the Company to UTHSC that would negatively impact the Company's financial forecasts. Additionally the failure of the Company to make timely milestone and royalty payments to UTHSC under the terms of the License Agreement could lead to License termination which would adversely affect the value of our business.

Anticipated Future Fundraising
The Company is dependent upon the net proceeds of this Offering. Additional future financing will be required to fund necessary research and development, pre-clinical studies and clinical trials, to commercialize the Company's products and to fund the Company's growth that is expected to occur if such products are approved for marketing. In particular, the Company hopes to raise additional funding for its operations through the sale of common stock, the sale of preferred stock, the issuance of warrants or other convertible debt, or lender financing. These offerings may include offers to sell new classes of stock with preferred rights and other preferences intended to induce investment in the Company. Prospective

investors should be aware that they will likely face dilution of their ownership in the Company as a result of this additional financing. In addition, securities may be issued to later investors that provide rights that are significantly superior or on parity with the holders of the Series C Preferred Stock, including with respect to the payment of dividends, payments upon a sale or liquidation of the Company, conversion into our Common Stock, anti-dilution protection, voting and redemption. Existing shareholders may or may not have the right to participate in these offerings. If the Company fails to obtain the capital necessary to fund its operations, it will be unable to successfully develop its products and may have to cease operations.

Lack of Market for Securities
The Series C Preferred Stock may not be transferred unless it is registered under applicable securities laws or the transfer is exempt from such registration. The Series C Preferred Stock is not currently registered for public sale, and there is no assurance when or if any such registration will occur. Additionally, there is no public market for the Series C Preferred Stock and no market may ever exist, and if a shareholder wishes to transfer it shares, the shareholder may not find a buyer. A shareholder wishing to transfer its Series C Preferred Stock may not be permitted or able to do so.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.
We will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our business. We intend to use the net proceeds from this offering for funding our operations; research and product development activities; sales and marketing activities, including to support the ongoing commercialization of our products; for property, plant and equipment, and intellectual property; and for working capital and other general corporate purposes. We may also use a portion of our net proceeds to acquire or invest in complementary businesses or other assets; however, we currently have no agreements or commitments to complete any such transaction. We have not allocated these net proceeds for any specific purposes. We might not be able to yield a significant return, if any, on any investment of these net proceeds. You will not have the opportunity to influence our management's decisions on how to use the net proceeds from this offering, and our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates and cause the value of our business to decline.

We have never paid dividends on our capital stock, and we do not anticipate paying any cash dividends in the foreseeable future.
We have paid no cash dividends on any of our classes of capital stock to date and currently intend to retain our future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our stock will be your sole source of gain for the foreseeable future.

Ownership and Capital Structure; Rights of the Securities

Ownership
The following table sets forth information regarding beneficial ownership of the company's holders of 20% or more of any class of voting securities as of the date of this Offering Statement filing.

Stockholder Name	Number of Securities Owned	Type of Security Owned	Percentage
Xiao-Dong Chen	1,410,294	Common Stock	9.85%
Xiao-Dong Chen	1,666	Series C Preferred Stock	

The Company's Securities

The Company has authorized Common Stock, Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series C-1 Preferred Stock, Curi Bio, Inc. (Convertible Note), and SAFE. As part of the Regulation Crowdfunding raise, the Company will be offering up to 1,000,000 of Series C-1 Preferred Stock.

Common Stock

The amount of security authorized is 16,200,000 with a total of 5,522,569 outstanding.

Voting Rights

One vote per share, with no cumulative voting.

Material Rights

The total amount outstanding includes 2,012,000 Active grants under Amended & Restated 2012 Stock Plan

The total amount outstanding includes 577,084 shares to be issued pursuant to stock options, reserved but unissued.

Dividend Rights: Subject to preferential dividend rights of Preferred Stock, dividends may be declared and paid when determined by the Board of Directors from legally available funds.

Liquidation Rights: Upon dissolution or liquidation, holders are entitled to receive assets available for distribution ratably after satisfaction of preferential rights of Preferred Stock.

Series A Preferred Stock

The amount of security authorized is 4,000,000 with a total of 4,000,000 outstanding.

Voting Rights

On matters where Preferred and Common Stock vote together, Preferred Stock votes on an as-converted to Common Stock basis. Certain protective provisions require a class vote.

Material Rights

The amount outstanding includes 191,435 shares to be issued pursuant to warrants outstanding.

General for All Series of Preferred Stock

Dividends: Entitled to receive dividends prior to Common Stock, at specified rates per annum, which are cumulative.

Liquidation Preference: In a liquidation event, holders are entitled to receive a preference over Common Stock equivalent to their original purchase price plus any declared but unpaid dividends.

Conversion Rights: Holders can convert their Preferred Stock into Common Stock at specified conversion rates, subject to adjustments under certain conditions (e.g., stock splits, mergers).

Original Purchase Price: $2.00 per share.

Dividend Rate: $0.10 per share per annum.

Protective Provisions for Preferred Stock

Specific actions (e.g., amendments to the corporation's charter, issuance of new stock, certain corporate transactions) require the affirmative vote or written consent of the holders of a majority of the then-outstanding shares of the relevant series of Preferred Stock or of all Preferred Stock as a whole, protecting their interests against dilution or other actions that might adversely affect their rights.

Conversion and Other Rights

Adjustments to Conversion Price: Conversion prices are subject to adjustment in certain events, such as the issuance of additional shares at a price lower than the current conversion price or stock splits.

Automatic Conversion: Under certain conditions, including a Qualified Initial Public Offering (IPO) or by the election of a supermajority of Preferred Stock holders, Preferred Stock automatically converts into Common Stock.

Miscellaneous

Tax Responsibilities: The corporation will pay any taxes due upon the conversion of Preferred Stock, except for taxes due on transfers to names other than the holder converting the stock.

Status of Converted Stock: Converted stock ceases to be part of the authorized stock and cannot be reissued.

This summary outlines the key rights and restrictions associated with each class and series of stock within the corporation, highlighting the preferential treatment of Preferred Stock in areas like dividends and liquidation, along with their conversion rights into Common Stock under specific conditions.

Series B Preferred Stock

The amount of security authorized is 2,600,000 with a total of 2,247,713 outstanding.

Voting Rights

On matters where Preferred and Common Stock vote together, Preferred Stock votes on an as-converted to Common Stock basis. Certain protective provisions require a class vote.

Material Rights

The total amount outstanding includes 56,586 of shares to be issued pursuant to warrant reseve

The Preferred Stock is divided into Series A, B, C, and C-1, each with specific rights and preferences.

General for All Series of Preferred Stock

Dividends: Entitled to receive dividends prior to Common Stock, at specified rates per annum, which are cumulative.

Liquidation Preference: In a liquidation event, holders are entitled to receive a preference over Common Stock equivalent to their original purchase price plus any declared but unpaid dividends.

Conversion Rights: Holders can convert their Preferred Stock into Common Stock at specified conversion rates, subject to adjustments under certain conditions (e.g., stock splits, mergers).

Series B Preferred Stock

Original Purchase Price: $2.50 per share.

Dividend Rate: $0.125 per share per annum.

Protective Provisions for Preferred Stock

Specific actions (e.g., amendments to the corporation's charter, issuance of new stock, certain corporate transactions) require the affirmative vote or written consent of the holders of a majority of the then-outstanding shares of the relevant series of Preferred Stock or of all Preferred Stock as a whole, protecting their interests against dilution or other actions that might adversely affect their rights.

Conversion and Other Rights

Adjustments to Conversion Price: Conversion prices are subject to adjustment in certain events, such as the issuance of additional shares at a price lower than the current conversion price or stock splits.

Automatic Conversion: Under certain conditions, including a Qualified Initial Public Offering (IPO) or by the election of a supermajority of Preferred Stock holders, Preferred Stock automatically converts into Common Stock.

Miscellaneous

Tax Responsibilities: The corporation will pay any taxes due upon the conversion of Preferred Stock, except for taxes due on transfers to names other than the holder converting the stock.

Status of Converted Stock: Converted stock ceases to be part of the authorized stock and cannot be reissued.

This summary outlines the key rights and restrictions associated with each class and series of stock within the corporation, highlighting the preferential treatment of Preferred Stock in areas like dividends and liquidation, along with their conversion rights into Common Stock under specific conditions.

Series C Preferred Stock

The amount of security authorized is 2,600,000 with a total of 2,247,713 outstanding.

Voting Rights

On matters where Preferred and Common Stock vote together, Preferred Stock votes on an as-converted to Common Stock basis. Certain protective provisions require a class vote.

Material Rights

The total amount outstanding includes 56,586 of shares to be issued pursuant to outstanding warrant reserve.

The Preferred Stock is divided into Series A, B, C, and C-1, each with specific rights and preferences.

General for All Series of Preferred Stock

Dividends: Entitled to receive dividends prior to Common Stock, at specified rates per annum, which are cumulative.

Liquidation Preference: In a liquidation event, holders are entitled to receive a preference over Common Stock equivalent to their original purchase price plus any declared but unpaid dividends.

Conversion Rights: Holders can convert their Preferred Stock into Common Stock at specified conversion rates, subject to adjustments under certain conditions (e.g., stock splits, mergers).

Series C Preferred Stock

Original Purchase Price: $3.00 per share.

Dividend Rate: $0.15 per share per annum.

Protective Provisions for Preferred Stock

Specific actions (e.g., amendments to the corporation's charter, issuance of new stock, certain corporate transactions) require the affirmative vote or written consent of the holders of a majority of the then-outstanding shares of the relevant series of Preferred Stock or of all Preferred Stock as a whole, protecting their interests against dilution or other actions that might adversely affect their rights.

Conversion and Other Rights

Adjustments to Conversion Price: Conversion prices are subject to adjustment in certain events, such as the issuance of additional shares at a price lower than the current conversion price or stock splits.

Automatic Conversion: Under certain conditions, including a Qualified Initial Public Offering (IPO) or by the election of a supermajority of Preferred Stock holders, Preferred Stock automatically converts into Common Stock.

Miscellaneous

Tax Responsibilities: The corporation will pay any taxes due upon the conversion of Preferred Stock, except for taxes due on transfers to names other than the holder converting the stock.

Status of Converted Stock: Converted stock ceases to be part of the authorized stock and cannot be reissued.

This summary outlines the key rights and restrictions associated with each class and series of stock within the corporation, highlighting the preferential treatment of Preferred Stock in areas like dividends and liquidation, along with their conversion rights into Common Stock under specific conditions.

Series C-1 Preferred Stock

The amount of security authorized is 1,800,000 with a total of 0 outstanding.

Voting Rights

On matters where Preferred and Common Stock vote together, Preferred Stock votes on an as-converted to Common Stock basis. Certain protective provisions require a class vote.

Material Rights

The Preferred Stock is divided into Series A, B, C, and C-1, each with specific rights and preferences.

General for All Series of Preferred Stock

Dividends: Entitled to receive dividends prior to Common Stock, at specified rates per annum, which are cumulative.

Liquidation Preference: In a liquidation event, holders are entitled to receive a preference over Common Stock equivalent to their original purchase price plus any declared but unpaid dividends.

Conversion Rights: Holders can convert their Preferred Stock into Common Stock at specified conversion rates, subject to adjustments under certain conditions (e.g., stock splits, mergers).

Series C-1 Preferred Stock

Original Purchase Price: $3.00 per share (similar to Series C).

Dividend Rate: $0.15 per share per annum.

Protective Provisions for Preferred Stock

Specific actions (e.g., amendments to the corporation's charter, issuance of new stock, certain corporate transactions) require the affirmative vote or written consent of the holders of a majority of the then-outstanding shares of the relevant series of Preferred Stock or of all Preferred Stock as a whole, protecting their interests against dilution or other actions that might adversely affect their rights.

Conversion and Other Rights

Adjustments to Conversion Price: Conversion prices are subject to adjustment in certain events, such as the issuance of additional shares at a price lower than the current conversion price or stock splits.

Automatic Conversion: Under certain conditions, including a Qualified Initial Public Offering (IPO) or by the election of a supermajority of Preferred Stock holders, Preferred Stock automatically converts into Common Stock.

Miscellaneous

Tax Responsibilities: The corporation will pay any taxes due upon the conversion of Preferred Stock, except for taxes due on transfers to names other than the holder converting the stock.

Status of Converted Stock: Converted stock ceases to be part of the authorized stock and cannot be reissued.

This summary outlines the key rights and restrictions associated with each class and series of stock within the corporation, highlighting the preferential treatment of Preferred Stock in areas like dividends and liquidation, along with their conversion rights into Common Stock under specific conditions.

Curi Bio, Inc. (Convertible Note)

The security will convert into Equity under certain conditions (qualified financing or change of control), and the terms of the Curi Bio, Inc. (Convertible Note) are outlined below:

Amount outstanding: $1,617,698.63
Maturity Date: April 15, 2025
Interest Rate: 4.0%
Discount Rate: 20.0%
Valuation Cap: $0.00
Conversion Trigger: The Notes will convert into shares of Curi Bio in the same form and on the same terms in the next qualified financing of Curi Bio. A qualified financing is defined as the sale of Equity securities in an amount of $10,000,000 or greater. If a change of control occurs prior to the Note maturity date, or a qualified financing, Curi Bio will pay StemBioSys the Note principal amount and a 25% premium.

Material Rights

No valuation cap.

No payment is due until the maturity date of April 15, 2025. Curi Bio, Inc. may prepay with a 25% prepayment premium. The note may convert into equity under certain conditions (qualified financing or change of control), with a conversion discount of 20% from the cash price paid by new investors.

The accrued interest in that Note due StemBioSys through 3.31.2024 is $117,698.63 for a total balance due StemBioSys of $1,617,698.63.

SAFE

The security will convert into Series c preferred stock and the terms of the SAFE are outlined below:

Amount outstanding: $314,049.50
Interest Rate: 0.0%
Discount Rate: 50.0%
Valuation Cap: $0.00
Conversion Trigger: Equity financing greater than $2.5M

Material Rights

There are no material rights associated with SAFE.

What it means to be a minority holder

As a minority holder of Series C-1 Preferred Stock of the company, you will have limited rights in regards to the corporate actions of the company, including additional issuances of securities, company repurchases of securities, a sale of the company or its significant assets, or company transactions with related parties. Further, investors in this offering may have rights less than those of other investors, and will have limited influence on the corporate actions of the company.

Dilution

Investors should understand the potential for dilution. The investor's stake in a company could be diluted due to the company issuing additional shares. In other words, when the company issues more shares, the percentage of the company that you own will go down, even though the value of the company may go up. You will own a smaller piece of a larger company. This increase in number of shares outstanding could result from a stock offering (such as an initial public offering, another crowdfunding round, a venture capital round, angel investment), employees exercising stock options, or by conversion of certain instruments (e.g. convertible bonds, preferred shares or warrants) into stock. If the company decides to issue more shares, an investor could experience value dilution, with each share being worth less than before, and control dilution, with the total percentage an investor owns being less than before. There may also be earnings dilution, with a reduction in the amount earned per share (though this typically occurs only if the company offers dividends, and most early stage companies are unlikely to offer dividends, preferring to invest any earnings into the company).

Transferability of securities

For a year, the securities can only be resold:

- In an IPO;
- To the company;
- To an accredited investor; and
- To a member of the family of the purchaser or the equivalent, to a trust controlled by the purchaser, to a trust created for the benefit of a member of the family of the purchaser or the equivalent, or in connection with the death or divorce of the purchaser or other similar circumstance.

Recent Offerings of Securities

We have made the following issuances of securities within the last three years:

- Name: Series C stock
  Type of security sold: Equity
  Final amount sold: $2,340,351.00
  Number of Securities Sold: 780,117
  Use of proceeds: Funds were used for the development of the Company's atrial cardiomyocyte product and ongoing product development activities, efforts to commercialize the Company's portfolio of products, as well as general overhead and working capital used in continuing operations.
  Date: January 05, 2021
  Offering exemption relied upon: 506(b)

Financial Condition and Results of Operations

Financial Condition

You should read the following discussion and analysis of our financial condition and results of our operations together with our financial statements and related notes appearing at the end of this Offering Memorandum. This discussion contains

forward-looking statements reflecting our current expectations that involve risks and uncertainties. Actual results and the timing of events may differ materially from those contained in these forward-looking statements due to a number of factors, including those discussed in the section entitled "Risk Factors" and elsewhere in this Offering Memorandum.

Results of Operations

Circumstances which led to the performance of financial statements:

Product Revenue

Product Revenue for fiscal year 2023 was $217,868 compared to $197,896 in fiscal year 2022.

The increase in revenue from fiscal year 2022 to 2023 can be attributed to several factors including initial launch of the Company's Cardiomyocyte product and continued market growth of the Company's Matrix Plus and cell line products.

Grant Revenue

Grant revenue was $332,582 in 2023 vs. $169,838 in 2022 due to new grant activity for SBIR grants for further cardiomyocyte and Islet cell development.

Cost of Sales

Cost of Sales for fiscal year 2023 was $61,766 compared to $41,191 in fiscal year 2022.

The increase in Cost of Sales from fiscal year 2022 to 2023 is consistent with the revenue increase from 2022 to 2023 with some impact from a product sales mix toward our cell lines and the matrix plus product which has a slightly higher gross margin than our earlier matrix products..

Gross Margins

Gross margins for fiscal year 2023 were $488,684 compared to $326,543 in fiscal year 2022.

Gross margins increased year over year on higher product sales and grant revenues..

Expenses

Expenses for fiscal year 2023 were $2,056,694 compared to $2,092,314 in fiscal year 2022.

The modest decrease in expenses from 2022 to 2023 was due to decreased costs incurred during development of the company's cardiomyocyte product in 2023 vs. 2022.

Historical results and cash flows:

The Company is currently in the initial production and commercialization stage and is revenue generating. We are of the opinion the historical cash flows will not be indicative of the revenue and cash flows expected for the future because we anticipate growth in the business as we move beyond Covid 19 lab closures and supply chain bottlenecks. Past cash was primarily generated through equity investments, sale of the rights to the Cartox Instrument to CuriBio, Government Grants and Product and Service revenues. Our goal is to achieve breakeven cash flow in the next 24 to 36 months.

Liquidity and Capital Resources

What capital resources are currently available to the Company? (Cash on hand, existing lines of credit, shareholder loans, etc...)

As of May 1st 2024, the Company has capital resources available in several forms; 1. Cash on hand of approximately $45k, 2. Pending grant payments from NIH for our Phase 1 Islet grant of ~$36k, 3. A grant award pending payment from the City of San Antonio in the amount of $12.5k, and numerous other grant applications pending decision which if approved would provide more than $2M in funding to the Company of the next several years, 4. Ongoing product sales generating between ~$30 -$35k per month in revenues and growing. Additionally, the Company has a supportive Board and core shareholder group, many of who intend to participate in this Offering.

How do the funds of this campaign factor into your financial resources? (Are these funds critical to your company operations? Or do you have other funds or capital resources available?)

We believe the funds of this campaign are critical to our company operations. These funds are required to support product development and market expansion initiatives.

Are the funds from this campaign necessary to the viability of the company? (Of the total funds that your company has, how

much of that will be made up of funds raised from the crowdfunding campaign?)

We believe the funds from this campaign are necessary to the viability of the Company. Of the total funds that our Company has, a significant portion will be made up of funds raised from the crowdfunding campaign, if it raises its maximum funding goal.

How long will you be able to operate the company if you raise your minimum? What expenses is this estimate based on?

If the Company raises the minimum offering amount, we anticipate the Company will be able to operate for ~ 1 month. This is based on our current cash on hand and expected receivables totaling approximately $50k, a current monthly burn rate of $90k for expenses related to salaries, lab and office facilities, ongoing R&D projects and sales and marketing efforts including attendance of key conferences and targeted digital marketing.

How long will you be able to operate the company if you raise your maximum funding goal?

If the Company raises the target offering amount, we anticipate the Company will be able to operate for at least an additional 2 years and hopefully to cash flow positive (indefinite operations). This is based on a current monthly burn rate of ~$135,000 for expenses related to salaries, inventory, R&D, and marketing efforts offset by product sales and grants.

Are there any additional future sources of capital available to your company? (Required capital contributions, lines of credit, contemplated future capital raises, etc...)

The Company believes that this Offering will satisfy the capital requirement for the Company to achieve cash flow positive and grow further funded by cash flow generated by operations and growing product sales.

Indebtedness

- Creditor: Jean Cheaver
  Amount Owed: $1,000,000.00
  Interest Rate: 8.5%
  Interest Rate: 8.5% Floating at Prime rate

- Creditor: Jean Cheever
  Amount Owed: $1,000,000.00
  Interest Rate: 0.0%
  Maturity Date: June 15, 2024
  The note is secured by the Curi Bio, Inc. convertible note, assigned to the lender on January 1, 2023. Interest payments are due quarterly, with the full amount due by June 15, 2024. The note was amended several times, increasing the principal and adjusting terms based on the WSJ Prime Rate.

- Creditor: Curi Bio, Inc. (Convertible Note)
  Amount Owed: $1,617,698.63
  Interest Rate: 4.0%
  Maturity Date: April 15, 2025
  See corresponding entry in Company securities section for details.

- Creditor: SAFE
  Amount Owed: $314,049.50
  Interest Rate: 0.0%
  conversion trigger Equity financing greater than $2.5M discount rate 50% valuation cap None

Related Party Transactions

- Name of Person: Jean Cheaver
  Relationship to Company: Director
  Nature / amount of interest in the transaction: Debt
  Material Terms: Amount Owed: $1,000,000 Interest Rate: 8.5% Floating at Prime rate

- Name of Person: Dr. Xiao-Dong Chen
  Relationship to Company: Director
  Nature / amount of interest in the transaction: Consulting Services for Scientific Advisory, Significant Common Shares

Owner
Material Terms: Amount Owed: $3,333/month, Total paid: $33,333 (in both 2022 and 2021)

- Name of Person: Dr. Todd Heron
  Relationship to Company: Director
  Nature / amount of interest in the transaction: Consulting Services for Scientific Advisory, Common Stock and Stock Options Holder
  Material Terms: Amount Owed: $3,500/month, Total paid: $45,500 (in 2022)

Valuation

Pre-Money Valuation: $42,053,985.00

Valuation Details:

This pre-money valuation was calculated internally by the Company without the use of any formal third-party independent evaluation.

The pre-money valuation has been calculated on a fully diluted basis. In making this calculation, we have assumed:

(i) all preferred stock is converted to common stock;

(ii) all outstanding options and warrants are exercised; and

(iii) any shares reserved for issuance under a stock plan are issued.

The pre-money valuation does not take into account any convertible securities currently outstanding. The Company currently has $1,617,698.63 in convertible notes outstanding. Please refer to the Company Securities section of the Offering Memorandum for further details regarding current outstanding convertible securities which may affect your ownership in the future.

Use of Proceeds

If we raise the Target Offering Amount of $15,000.00 we plan to use these proceeds as follows:

- StartEngine Platform Fees
  5.5%

- StartEngine Premium Fees
  94.5%
  StartEngine Premium Fees

If we raise the over allotment amount of $3,000,000.00, we plan to use these proceeds as follows:

- StartEngine Platform Fees
  5.5%

- Marketing
  31.1%
  Approximately $935k will be allocated to enhancing the commercial team and marketing initiatives to ensure aggressive sales growth targets are met in a timely manner. The Company intends to hire a VP of Sales to lead the commercial organization as well as supporting sales staff to implement strategic plans.. This will support the market launch of our CELLvo matrix technology-based research products, enhance the brand presence for CELLvo and StemBioSys brands, and maintain robust support for our key worldwide distributors. The goal is to significantly increase our market visibility and product reach and drive sales

- Research & Development
  10.0%
  About $301k will be dedicated to Research & Development. This includes developing and launching new cell lines, matrices, and media products based on the CELLvo matrix technology, supporting the product development of the newly acquired Cartox technology, and completing therapeutic product concept feasibility studies as grant funding becomes available. This investment is crucial for sustaining innovation and staying at the forefront of biotechnology advancements.

- Manufacturing Capabilities
  9.1%
  We plan to allocate ~$271k towards the hiring of a production/quality manager at our production facility in San

Antonio Texas.. This will ensure we have sufficient stock of our newly launched products to meet anticipated demand and continued quality products delivered to our customer base.

- Working Capital
  8.1%
  Approximately $244k will be reserved as working capital. This funding will support day-to-day operations, help manage cash flow for operational expenses including General & Administrative costs, Legal, License, Taxes & Audit fees, and allow for strategic flexibility. It ensures the company remains operational and financially healthy as we scale our activities.

- Contingency - Retire Line of Credit & Payables
  36.2%
  Assuming the Offering generates more than ~$2M in new capital for the Company, an allocation of ~$1.084M $ will go towards any contingency needs, and lastly to retiring our outstanding line of credit and other payables outstanding. f

The Company may change the intended use of proceeds if our officers believe it is in the best interests of the company.

Regulatory Information

Disqualification

No disqualifying event has been recorded in respect to the company or its officers or directors.

Compliance Failure

The company has not previously failed to comply with the requirements of Regulation Crowdfunding.

Ongoing Reporting

The Company will file a report electronically with the SEC annually and post the report on its website no later than April 30 (120 days after Fiscal Year End). Once posted, the annual report may be found on the Company's website at https://stembiosys.com (stembiosys.com/annualreport).

The Company must continue to comply with the ongoing reporting requirements until:

(1) it is required to file reports under Section 13(a) or Section 15(d) of the Exchange Act;

(2) it has filed at least one (1) annual report pursuant to Regulation Crowdfunding and has fewer than three hundred (300) holders of record and has total assets that do not exceed $10,000,000;

(3) it has filed at least three (3) annual reports pursuant to Regulation Crowdfunding;

(4) it or another party repurchases all of the securities issued in reliance on Section 4(a)(6) of the Securities Act, including any payment in full of debt securities or any complete redemption of redeemable securities; or

(5) it liquidates or dissolves its business in accordance with state law.

Updates

Updates on the status of this Offering may be found at: www.startengine.com/stembiosys

Investing Process

See Exhibit E to the Offering Statement of which this Offering Memorandum forms a part.

EXHIBIT B TO FORM C

FINANCIAL STATEMENTS AND INDEPENDENT ACCOUNTANT'S REVIEW FOR StemBioSys, Inc.

[See attached]

StemBioSys, Inc.

Financial Report
December 31, 2023

weaver
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Independent Auditor's Report

To the Board of Directors of
StemBioSys, Inc.

Opinion

We have audited the financial statements of StemBioSys, Inc. (a Delaware corporation), which comprise the balance sheets as of December 31, 2023 and 2022, and the related statements of operations, changes in stockholders' equity, and cash flows for the years then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of StemBioSys, Inc. as of December 31, 2023 and 2022, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of StemBioSys, Inc. and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about StemBioSys, Inc.'s ability to continue as a going concern for one year after the date that the financial statements are issued [or when applicable, one year after the date that the financial statements are available to be issued].

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

Weaver and Tidwell, L.L.P.
9311 San Pedro Avenue, Suite 1400 | San Antonio, Texas 78216
Main: 210.737.1042
CPAs AND ADVISORS | WEAVER.COM

The Board of Directors of
StemBioSys, Inc.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of StemBioSys, Inc.'s internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about StemBioSys, Inc.'s ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control–related matters that we identified during the audit.

Other Matter - Going Concern

The accompanying financial statements have been prepared assuming that StemBioSys, Inc. will continue as a going concern. As discussed in Note 1 to the financial statements, the StemBioSys, Inc. has incurred recurring losses from operations, and continues to incur significant research and development expenses. These conditions raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments from the outcome of this uncertainty. Our opinion is not modified with respect to this matter.

Weaver and Tidwell, L.L.P.

WEAVER AND TIDWELL, L.L.P.

San Antonio, Texas
April 30, 2024

StemBioSys, Inc.

Balance Sheets
December 31, 2023 and 2022

	2023	2022
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 111,047	$ 50,372
Accounts receivable	21,212	33,429
Inventory	288,982	268,739
Prepaid expenses	-	8,975
Total current assets	421,241	361,515
PROPERTY AND EQUIPMENT, net	63,633	111,139
LEASE RIGHT OF USE ASSET	297,884	397,178
OTHER ASSETS		
Notes receivable	1,500,000	2,025,000
Intangibles, net	546,550	582,083
Other assets	109,442	66,417
Total other assets	2,155,992	2,673,500
TOTAL ASSETS	$ 2,938,750	$ 3,543,332
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 106,055	$ 91,807
Accrued expenses	382,213	95,102
Current portion of notes payable	1,000,000	-
Current portion of lease liabilities	98,013	90,501
Total current liabilities	1,586,281	277,410
LONG-TERM LIABILITIES		
Notes payable	-	500,000
Convertibles SAFE notes	184,392	-
Non-current portion of lease liabilities	221,105	319,118
Total long-term liabilities	405,497	819,118
Total liabilities	1,991,778	1,096,528
STOCKHOLDERS' EQUITY		
Series A preferred stock, .10 par value, 4,000,000 shares authorized, 4,000,000 shares issued and outstanding at both December 31, 2023 and 2022	400,000	400,000
Series B preferred stock, .10 par value, 2,700,000 shares authorized, 2,478,356 issued and outstanding at December 31, 2023 and 2022	247,836	247,836
Series C preferred stock, .10 par value, 2,200,000 shares authorized, 2,191,127 issued and outstanding at December 31, 2023 and 2022	219,112	219,112
Common stock, .0001 par value, 13,000,000 shares authorized, 2,933,485 and 2,923,485 shares issued and outstanding at December 31, 2023 and 2022, respectively	293	292
Additional paid in capital	20,102,835	20,065,407
Accumulated deficit	(20,023,104)	(18,485,843)
Total stockholders' equity	946,972	2,446,804
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 2,938,750	$ 3,543,332

The Notes to financial statements
are an integral part of these statements.

StemBioSys, Inc.

Statements of Operations

Years Ended December 31, 2023 and 2022

	2023	2022
REVENUE		
Grant revenue	$ 332,582	$ 169,838
Product revenue	217,868	197,896
Total revenue	550,450	367,734
COST OF SALES	61,766	41,191
Gross profit	488,684	326,543
OPERATING EXPENSES		
Employee and consultant	600,789	483,557
Marketing	135,833	145,999
Research and development	774,536	968,491
Legal, tax, and audit	151,108	17,347
Selling expenses	11,166	15,662
General and administrative	383,262	461,258
Total operating expenses	2,056,694	2,092,314
OPERATING LOSS	(1,568,010)	(1,765,771)
OTHER INCOME (EXPENSE)		
Interest income	65,856	60,268
Interest expense	(75,419)	(15,560)
Other income	43,562	-
Gain on sale of subsidiary	-	2,341,315
Total other income (expense)	33,999	2,386,023
State income tax	3,250	3,925
NET INCOME (LOSS)	$ (1,537,261)	$ 616,327

The Notes to financial statements
are an integral part of these statements.

StemBioSys, Inc.

Statements of Stockholders' Equity
Years Ended December 31, 2023 and 2022

	Preferred Stock - Series A		Preferred Stock - Series B		Preferred Stock - Series C		Common Stock		Additional Paid in Capital	Accumulated Deficit	Totals
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
BALANCE, December 31, 2021	4,000,000	$ 400,000	2,478,356	$ 247,836	2,191,127	$ 219,112	2,589,547	$ 259	$ 19,971,378	$ (19,102,170)	$ 1,736,415
Common stock issuance							333,938	33	278		311
Stock-based compensation	-	-	-	-	-	-	-	-	93,751	-	93,751
Net income	-	-	-	-	-	-	-	-	-	616,327	616,327
BALANCE, December 31, 2022	4,000,000	400,000	2,478,356	247,836	2,191,127	219,112	2,923,485	292	20,065,407	(18,485,843)	2,446,804
Common stock issuance	-	-	-	-	-	-	10,000	1	3,199	-	3,200
Stock-based compensation	-	-	-	-	-	-	-	-	34,229	-	34,229
Net loss	-	-	-	-	-	-	-	-	-	(1,537,261)	(1,537,261)
BALANCE, December 31, 2023	4,000,000	$ 400,000	2,478,356	$ 247,836	2,191,127	$ 219,112	2,933,485	$ 293	$ 20,102,835	$ (20,023,104)	$ 946,972

The Notes to financial statements
are an integral part of these statements.

StemBioSys, Inc.

Statements of Cash Flows
Years Ended December 31, 2023 and 2022

	2023	2022
CASH FLOW FROM OPERATING ACTIVITIES		
Net income (loss)	$ (1,537,261)	$ 616,327
Adjustments to reconcile net income (loss) to net cash used in operating activities		
Depreciation expense	146,800	159,236
Amortization expense	57,187	55,556
Stock-based compensation	34,229	93,751
Gain on sale of subsidiary	-	(2,341,240)
Non-cash stock issuance	-	33
Change in operating assets and liabilities that provided (used) cash		
Accounts receivable	12,217	9,826
Inventory	(20,243)	(25,087)
Other Assets	(43,025)	(59,642)
Prepaid expenses	8,975	22,733
Accounts payable	14,248	(42,115)
Accrued expenses	287,111	65,823
Operating lease liability	(90,501)	(86,853)
Net cash used in operating activities	(1,130,263)	(1,531,652)
CASH FLOW FROM INVESTING ACTIVITIES		
Patent and trademark acquisition	(21,654)	(22,148)
Proceeds from sale of Cartox, Inc. assets	-	300,000
Collection of notes receivable	525,000	75,000
Net cash provided by (used in) investing activities	503,346	352,852
CASH FLOW FROM FINANCING ACTIVITIES		
Proceeds from issuance of debt	684,392	500,000
Principal payments on debt	-	(145,200)
Proceeds from issuance of common stock, net	3,200	278
Net cash provided by financing activities	687,592	355,078
Net increase (decrease) in cash and cash equivalents	60,675	(823,722)
CASH AND CASH EQUIVALENTS, beginning of year	50,372	874,094
CASH AND CASH EQUIVALENTS, end of year	$ 111,047	$ 50,372
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION		
State taxes paid	$ 3,250	$ 3,925
NON-CASH INVESTING AND FINANCING INFORMATION		
Operating lease assets obtained in exchange for lease liabilities	$ -	$ 496,472
Notes receivable received as consideration for subsidiary sold	$ -	$ 2,100,000

The Notes to financial statements
are an integral part of these statements.

StemBioSys, Inc.

Notes to Financial Statements

Note 1. Summary of Significant Accounting Policies

Nature of Business

StemBioSys, Inc. incorporated on June 25, 2012 in the state of Delaware. StemBioSys Inc. (the Company) is a research tools company in the stem cell and regenerative medicine space. The Company has a unique cell-derived matrix which it is commercializing for applications in drug discovery and toxicology screening as well as basic research. The Company has developed a business plan and is executing a strategy to further develop and patent the matrix and the process of replicating the stem cells.

The accompanying financial statements include the accounts of Cartox, Inc., a majority owned subsidiary through March 19, 2022, the date that Cartox, Inc. was sold (see Note 4). All significant intercompany accounts and transactions have been eliminated.

Liquidity and Going Concern

As reflected in the accompanying financial statements, as of and for the years ended December 31, 2023 and 2022, the Company has recorded a net loss of approximately $1.54 million and net income of approximately $616k, respectively, and cash used in operations of approximately $605k and approximately $1.46 million, respectively. The Company is still in the early commercialization phase of their lifecycle and anticipates that it will continue to incur significant research, development and commercialization expenses. These events and conditions give rise to substantial doubt regarding the Company's ability to continue as a going concern foStemr a reasonable period of time. Management is actively undertaking plans to obtain additional capital to support operations and development efforts until the Company is able to achieve profitable operations. Subsequent to December 31, 2023 and through the date which these financials are available to be issued, the Company has refocused available cash toward driving sales growth and increasing market penetration for it's existing products. In addition, the Company is preparing to launch a $3 million offering through the Start Engine crowd funding platform. Management believes these actions will improve the cash position of the Company and if the offering is successful, will allow the Company to continue operations for the foreseeable future.

There can be no assurance that the Company can successfully accomplish these steps, and it is uncertain that the Company will be able to obtain additional financing, or that such financing will be available to the Company on satisfactory terms and conditions, if at all. The accompanying financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets, or the amounts and classifications of liabilities that may result from the possible inability of the Company to continue as a going concern.

Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires the Company's management to make estimates and assumptions that affect reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates

Cash and Cash Equivalents

Cash and cash equivalents include all highly liquid investments with original maturity dates of three months or less when purchase.

Inventory

Inventory, consisting mainly of finished goods and is stated at lower of actual cost or net realizable value. Cost for inventory is determined on a first-in, first-out (FIFO) basis. The Company performs periodic review of the inventory that considers future demand and market conditions. If these conditions are less favorable than forecasted, the Company may be required to record a valuation allowance.

Management has determined that a reserve for obsolete inventory is not required December 31, 2023 and 2022. The Company accounts for expired inventory in the period in which it occurs.

Inventory consisted of the following for the years ended December 31:

	2023	2022
Finished goods	$ 288,982	$ 268,739
	$ 288,982	$ 268,739

Property and Equipment

Property and equipment are recorded at cost and depreciated over their estimated useful lives using the straight-line method. Leasehold improvements are amortized over the lesser of the lease term or the estimated useful lives of the underlying assets. Estimated useful lives for property and equipment range from five to seven years. Major additional improvements are capitalized, while maintenance and repairs that do not improve or extend the useful life of the respective asset are charged to expense as incurred. Gains and losses on disposed assets are reflected in current operations.

Patents

Patents are recorded at cost and are being amortized on a straight-line basis over a period which is the shorter of 20 years or the remaining life of the patent.

Long-Lived Assets

The Company evaluates the recoverability of its long-lived assets whenever adverse events or changes in business climate indicate that the expected undiscounted future cash flows from the related assets may be less than previously anticipated. If the net book value of the related assets exceeds the undiscounted future cash flows, the carrying amount would be reduced to the present value of their expected future cash flows and an impairment loss would be recognized. The Company has not experienced an impairment loss on its long-lived assets.

Revenue Recognition

Product Revenue
The Company generates revenue through the sale of product. Revenue is recognized when it has satisfied the performance obligation of product shipment by transferring control of the product. The transaction price is fixed. Shipping and handling costs are included in revenue with associated costs being offset as cost of sales.

Grant Revenue
The Company recognizes grant revenue at the time the associated allowed expenditure is incurred.

Customer Contract Assets
The Company's receivables are generated from customer contracts. The Company's payment terms are fixed, and the period between invoicing and payment is not significant.

Incremental Costs of Obtaining a Contract
The Company incurs incremental costs in the form of sales commissions paid to sales personnel. These are costs the Company would not incur if a contract was not obtained to deliver product. The Company has elected to apply the practical expedient and as such, these costs are expensed in full at the time revenue is recognized.

Shipping and Handling Costs

The Company recognizes as revenue shipping and handling costs billed to customers with the associated costs recorded as cost of sales.

Income Taxes

The Company accounts for income taxes in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification Topic 740, *Income Taxes* (ASC 740). This statement prescribes the use of the liability method whereby deferred tax asset and liability account balances are determined based on the differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company provides for a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value.

ASC 740 also provides guidance on de-recognition, measurement and classification of amounts relating to uncertain tax positions, accounting for and disclosure of interest and penalties, accounting in interim periods, disclosures and transition relating to the adoption of the new accounting standard.

Under ASC 740-10, the Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained upon examination by the relevant tax authority based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. Any accrued interest or penalties related to uncertain tax positions is included in the financial statements as a component of income tax expense. Based on the evaluation of the Company's tax positions, management believes the Company has no uncertain tax positions as of December 31, 2023, and has recorded no interest or penalties related to uncertain tax positions. As of December 31, 2023, the Company's tax years 2016 and thereafter remain subject to examination.

The Company is subject to the Delaware Franchise Tax, and has recorded the associated tax as state income tax.

Research and Development Costs

Expenditures for research and development activities relating to product development and improvement are charged to expense as incurred. Employee and consultant expenses for research and development related personnel are allocated to research and development. Such expenditures amounted to $774,536 and $968,491 for the years ended December 31, 2023 and 2022, respectively.

Stock-Based Compensation

At December 31, 2023 and 2022, the Company had outstanding stock-based compensation, which is more fully described in Note 6. The Company accounts for stock-based compensation in accordance with the provisions of Accounting Standards Codification Topic 718, *Compensation–Stock Compensation* (ASC 178), which requires the recognition of expense related to the fair value of stock-based compensation awards in the statements of operations.

For stock options issued to employees and members of the Board, the Company estimates the grant date fair value or each option using the Black-Scholes option-pricing model. The use of the Black-Scholes option-pricing model requires management to make assumptions with respect to the expected term of the option, the expected volatility of the common stock consistent with the expected life of the option, risk-free interest rates and expected dividend yields of the common stock. For awards subject to the service-based vesting conditions, the Company recognizes stock-based compensation expense, net of estimated forfeitures, equal to the grant date fair value of the stock options on a straight-line basis over the requisite service period, which is generally the vesting term. Vesting periods are typically four years from grant date, with expiration date set at ten years from the grant date. Forfeitures are required to be estimated at the time of the grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

See Note 6 for a discussion of the assumptions used by the Company in determining the grant fair value of options granted under the Black-Scholes option pricing model, as well as a summary of the stock option activity under the Company's stock-based compensation plan for the year ended December 31, 2023 and 2022.

Recently Adopted Accounting Pronouncements

Leases

On January 1, 2022, the Company adopted ASC Topic 842, Leases. The new guidance requires the recognition of right-of-use assets and lease liabilities on the balance sheet for leases with terms greater than 12 months or leases that contain a purchase option that is reasonably certain to be exercised. Lessees are now required to classify leases as either finance or operating leases. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease.

The Company elected to utilize the package of practical expedients in ASC 842-10-65-1(f) that, upon adoption of ASC 842, allows entities to (1) not reassess whether any expired or existing contracts are or contain leases, (2) retain the classification of leases (e.g., operating or finance lease) existing as of the date of adoption and (3) not reassess initial direct costs for any existing leases. The Company elected to utilize the practical expedient in ASC 842-10-65-1(gg) in which an entity does not need to assess whether existing land easements not previously accounted for as leases contain a lease under ASC 842.

The Company also elected to utilize the practical expedient in ASC 842-10-15-37 in which the Company has chosen to account for each separate lease component of a contract and its associated non-lease components as a single lease component.

The Company adopted ASC 842 using the modified retrospective method, and accordingly, the new guidance was applied retrospectively to leases that existed as of January 1, 2022 (the date of initial application). As a result, the Company has recorded total right-of-use assets of $496,472 and total lease liabilities of $496,472 as of January 1, 2022.

The adoption of ASC 842 did not have a material impact on the Company's results of operations or cash flows.

Concentration of Risk

The Company maintains its cash in bank deposit accounts which, at times, may exceed federally insured limits. Accounts are guaranteed by the Federal Deposit Insurance Corporation up to certain limits. The Company has not experienced any losses in such accounts.

Subsequent Events

The Company has evaluated all subsequent events and transactions for potential recognition or disclosure in the financial statements through April 30, 2024, the date these financial statements were available to be issued.

Reclassification

Certain reclassifications have been made in the prior year's financial statements to conform to the current year's presentation.

Note 2. Intangibles

Intangible assets are as follows as of December 31, 2023:

	Cost	Accumulated Amortization	Total
Trademarks, non-amortizable	$ 33,141	$ -	$ 33,141
Patents and licensing agreements	886,692	373,283	513,409
Total	$ 919,833	$ 373,283	$ 546,550

Intangible assets are as follows as of December 31, 2022:

	Cost	Accumulated Amortization	Total
Trademarks, non-amortizable	$ 38,579	$ -	$ 38,579
Patents and licensing agreements	859,468	315,964	543,504
Total	$ 898,047	$ 315,964	$ 582,083

Future amortization of the costs associated with intangibles with determinable lives is as follows:

Year Ending December 31,	
2024	$ 55,556
2025	55,556
2026	55,556
2027	55,556
2028	55,556
Thereafter	235,629
	$ 513,409

Amortization expense totaled $57,187 and $55,556 for the years ended December 31, 2023 and 2022, respectively, and is included in general and administrative expenses in the accompanying statements of operations.

Note 3. Property and Equipment

Property and equipment with determinable lives are as follows as of December 31, 2023:

	Cost	Accumulated Depreciation	Total
Property and equipment	$ 600,744	$ 537,111	$ 63,633

Property and equipment with determinable lives are as follows as of December 31, 2022:

	Cost	Accumulated Depreciation	Total
Property and equipment	$ 600,743	$ 489,604	$ 111,139

Depreciation expense totaled $47,507 and $59,941 for the years ended December 31, 2023 and 2022, respectively.

Note 4. Sale of Cartox, Inc. Assets

On March 29, 2022, the Company entered into a product sale agreement with Curi Bio, Inc. Under the agreement the Company sold the Cartox, Inc. assets and all exclusive, worldwide rights in its entirety for $2,400,000 in total non-contingent consideration. The transaction closed on April 15, 2022.

The non-contingent consideration consisted of $300,000 in cash, $600,000 in the form of a promissory note, and a $1,500,000 convertible note. The Company recognized a gain of $2,341,240 for the sale of these assets.

There is additional contingent consideration that includes an additional potential cash payment of $350,000 which is due from Curi Bio, Inc. upon the cumulative sale of 30 "Cartox" units by Curi Bio, Inc. and a potential discount of 20% upon conversion of the $1,500,000 convertible note based on a future equity financing of Curi Bio, Inc. Since these contingencies are uncertain, the Company has elected to record this consideration if and when it actually occurs.

The below table summarizes the consideration received and fair value of assets sold under the terms of this agreement.

Fair value of consideration received	
Cash consideration	$ 300,000
Promissory note	600,000
Convertible note	1,500,000
Total sale consideration	2,400,000
Fair value of assets sold	
Software, net of accumulated depreciation	58,760
Total net assets sold	58,760
Total gain on sale of subsidiary	$ 2,341,240

Note 5. Notes Receivable

Effective April 15, 2022, as a part of the sale of Cartox, Inc. assets, the Company entered into a promissory note with Curi Bio, Inc. for a principal amount of $600,000 bearing interest at 4% per annum, with an original maturity date of December 31, 2022. On December 20, 2022, the note was amended to a maturity date of June 15, 2023. Monthly payments of $75,000 are scheduled until March 15, 2023, with three monthly payments of $100,000 following until June 15, 2023. The total of accrued interest must be paid by July 15, 2023. The balance on this note was $0 and $525,000 as of December 31, 2023 and 2022, respectively.

Effective April 15, 2022, as a part of the sale of Cartox, Inc. assets, the Company entered into a convertible note with Curi Bio, Inc., with a principal amount of $1,500,000 bearing interest at 4% per annum with a maturity date of April 15, 2025. No payment on this note is due or payable until the maturity date. The balance was $1,500,000 at December 31, 2023 and 2022.

Under the terms of the convertible note, Curi Bio, Inc., may prepay the note prior to maturity with a prepayment premium equal to 25% of the principal amount of the note.

Additionally, under the terms of the convertible note, if Curi Bio, Inc. issues and sells shares of its equity securities resulting in aggregate, cumulative gross proceeds of at least $10,000,000 (Qualified Financing), the outstanding balance of this note shall automatically convert in whole at a conversion price equal to the cash price paid per share multiplied by 0.80. Equivalently, the conversion price would be equal to the price discounted by 20% from such cash price paid by investors in the Qualified Financing.

Lastly, under the terms of the convertible note, if Curi Bio, Inc. consummates a change of control as defined in the agreement, Curi Bio, Inc., shall pay the note including accrued interest plus a repayment premium equal to 25% of the principal amount of the note.

Note 6. Revolving Note Agreement

On August 1, 2022, the Company entered into a revolving note agreement for the amount of $400,000. Interest on unpaid principal accrues at the WSJ Prime Rate which as of August 1, 2022 was 5.5%. Under the original agreement, all accrued and unpaid principal and interest is due on December 31, 2022.

As of December 31, 2023, the Company owed $500,000 under the agreement. As such, on January 1, 2023, the note was amended to a principal sum of $500,000 that may be advanced and outstanding. Interest on unpaid principal accrues at the WSJ Prime Rate which as of January 1, 2023 was 7.5%. The Company shall pay accrued interest on all outstanding borrowed amounts on March 15, 2023, June 15, 2023, September 15, 2023, and December 15, 2023.

On June 15, 2023, the agreement was amended to a principal sum of $1,000,000 that may be advanced and outstanding. Interest continues to accrue at the WSJ Prime Rate. The Company shall pay accrued interest on all outstanding borrowed amounts in accordance with the above noted timeline including March 15, 2024. All unpaid principal and accrued interest is due and payable in full on June 15, 2024.

The note is secured by the Curi Bio, Inc. convertible note and on January 1, 2023, the convertible note was assigned to the lender. During the term of this revolving note, the Company shall, within three days of its receipt of Curi Bio note payments, deliver each such payment to the lender which shall be applied against the balance and indebtedness due under this revolving note.

Note 7. Stock-Based Compensation

At December 31, 2023 and 2022, the Company had multiple stock-based compensation transactions, which are more fully described below.

The Company entered into stock-based compensation agreements with several employees and members of the Board of Directors from 2013 through 2023, as incentives to promote the success of the Company. These options granted the right to purchase a total of 1,567,000 common shares. The Company accounts for these transactions based on the Black-Scholes pricing model.

The fair value of each option issued to employees was estimated on the date of the grant using the Black-Scholes option pricing method with the following assumptions, for the year ended December 31, 2023 and 2022:

Expected volatility	62.99% - 77.31%
Expected term (in years)	7 - 10 years
Risk-free interest rate	0.46% - 3.97%
Expected dividend yield	0.00%

A summary of option activity as of December 31, 2023 and 2022, and changes during the years then ended are presented below.

Options	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2021	2,293,000	$ 0.67	4.0	$ 1,551,531
Granted	107,000	0.46	9.9	49,220
Exercised	(604)	0.46	8.4	(278)
Forfeited or expired	(377,396)	1.23	0.20	(464,197)
Outstanding at December 31, 2022	2,022,000	$ 0.55	4.0	$ 1,136,276
Vested and exercisable at December 31, 2022	1,892,177	$ 0.56	3.8	$ 1,056,902
Granted	-	$ 0.46	9.9	$ -
Exercised	(10,000)	0.32	6.0	(3,200)
Forfeited or expired	(445,000)	0.99	-	(440,550)
Outstanding at December 31, 2023	1,567,000	$ 0.43	4.0	$ 692,526
Vested and exercisable at December 31, 2023	1,529,354	$ 0.43	3.9	$ 657,901

Fair Value of Underlying Instrument

The Company estimates the fair value of its stock-based awards to employees using the Black-Scholes option pricing model.

Expected Volatility

The Company estimated the expected volatility based on actual historical volatility of the stock price of similar companies with publicly-traded equity securities. The Company calculated the historical volatility of the selected companies by using daily closing prices over a period of the expected term of the associated award. The companies were selected based on their enterprise value, risk profiles, position within the industry, and with historical share price information sufficient to meet the expected term of the associated award. A decrease in the selected volatility would decrease the fair value of the underlying instrument.

Risk-Free Interest Rate

The Company estimated the risk-free interest rate in reference to the yield on U.S. Treasury securities with a maturity date commensurate with the expected term of the associated award. A decrease in the selected risk-free rate would decrease the fair value of the underlying instrument.

Expected Dividend Yield

The Company estimated the expected dividend yield based on consideration of its historical dividend experience and future dividend expectations. The Company has not historically declared or paid dividends to stockholders. Moreover, it does not intend to pay dividends in the future, but instead expects to retain any earnings to invest in the continued growth of the business. Accordingly, the Company assumed an expected dividend yield of 0.0%.

Stock Option Activity

For the year ended December 31, 2023, the Company granted no stock options. For the year ended December 31, 2022, the Company granted stock options to purchase an aggregate of 107,000 shares of its common stock with grant date fair values of the options of $0.46 per option. Compensation expense for the options in 2023 and 2022 was $34,229 and $93,751, respectively.

During the year ended December 31, 2023, 10,000 options were exercised at a price of $0.32 per option. For the year ended December 31, 2022, 604 options were exercised at a price of $0.46 per option. In addition, during the years ending December 31, 2023 and 2022, 445,000 and 377,396 options were forfeited, respectively.

Note 8. Related Party Transactions

The Company entered into several significant related party transactions which consisted of consulting agreements with board members and shareholders.

Dr. Xiao-Dong Chen, a founder and Board Member who owns significant common shares. The Company has entered into a $3,333 per month contract for Scientific Advisory Services with Dr. Chen, and a total of $33,333 was paid to Dr. Chen in 2023 and 2022, respectively.

The Company has entered into a consulting services agreement for $3,500/month with Dr. Todd Heron for Scientific Advisory Services. During 2023, $45,500 in cash was paid to Dr. Heron. Dr. Heron owns a significant amount of the Company's common stock resulting from the 2020 acquisition of Cartox in addition to a number of stock options.

Note 9. Leases

The Company's right of use assets and lease liabilities primarily relate to facilities. None of the leases contain options to purchase the leased property, material residual value guarantees, or material restrictions and covenants.

Long-term leases (leases with terms greater than 12 months) are recorded on the balance sheet at the present value of the minimum lease payments not yet paid. The Company uses its incremental borrowing rate to determine the present value of the lease when the rate implicit in the lease is not readily determinable.

Short-term leases (leases with an initial term of 12 months or less or leases that are cancelable by the lessee or lessor without significant penalties) are not recorded on the balance sheet and are expensed on a straight-line basis over the lease term.

For the year ended December 31, 2023, the Company recognized expense related to operating leases to third parties in the amount of $126,393.

During the year ended December 31, 2023, the Company continued it's current lease at SATC which expires on December 31, 2025 with an option to extend at the then market rate as negotiated by the parties for 3 to 5 additional years. The Company determined if an arrangement is a lease at inception. A right-of-use asset and operating lease liability is recognized based on the present value of future minimum lease payments over the lease term at commencement date. The Company used its incremental borrowing rate based on the information available at the commencement date to determine the present value of future payments.

Future minimum lease payments under the non-cancelable operating leases (with initial or remaining lease terms in excess of one year) as of December 31, 2023were as follows:

Year Ending December 31,	Operating Leases
2024	$ 120,000
2025	120,000
2026	120,000
2027	-
2028	-
Thereafter	-
Total	360,000
Less amount representing interest	40,882
Present value of net minimum lease payments	319,118
Less current portion	98,013
Operating lease obligations, net of current portion	$ 221,105

The Company incurred rent expense of approximately $126,393 for the year ended December 31, 2023, and is included in general and administrative expense in the accompanying statements of income.

Note 10. Income Taxes

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets, including tax loss and credit carryforwards 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 that includes the enactment date. Deferred income tax expense represents the change during the period in the deferred tax assets and deferred tax liabilities. The components of the deferred tax assets and liabilities are individually classified as current and non-current based on their characteristics. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company recognizes the amount of taxes payable or refundable for the current year and recognizes deferred tax liabilities and assets for the expected future tax consequences of events and transactions that have been recognized in the Company's financial statements or tax returns. The Company currently has substantial net operating loss carryforwards and other smaller timing differences resulting in net deferred tax assets of approximately $4,575,127 and $4,180,963 for the years ending December 31, 2023 and 2021, respectively. The Company has recorded a 100% valuation allowance against net deferred tax assets due to uncertainty of their ultimate realization.

At December 31, 2023 and 2022, the Company had net operating loss carryforwards of $20,966,315 and $19,679,540, respectively, which will begin expiring in 2032.

Note 11. Contingencies

Certain conditions may exist as of the date the financial statements are issued which may result in a loss to the Company, but which will only be resolved when one or more future events occur or fail to occur. The Company's management and its legal counsel assess such contingent liabilities, and such assessment inherently involves an exercise of judgment. In assessing loss contingencies related to legal proceedings that are pending against the Company, or un-asserted claims that may result in such proceedings, the Company's legal counsel evaluates the perceived merits of any legal proceedings or un-asserted claims as well as the perceived merits of the amount of relief sought or expected to be sought therein.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company's financial statements. If the assessment indicates that a potentially material loss contingency is not probable, but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, together with an estimate of the range of possible loss if determinable and material, would be disclosed.

Loss contingencies considered remote are generally not disclosed unless they involve guarantees, in which case the nature of the guarantee would be disclosed.

EXHIBIT C TO FORM C

PROFILE SCREENSHOTS

[See attached]

3 MONTHS LEFT !!

SELF-A-PHILLY STEMBIOSYS

The Next Evolution In Cell Culture™

Revolutionizing the Regenerative Medicine Industry with Human-Relevant Technologies — Cut the drugs, stem cell therapy and discovery without using animal models.

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OVERVIEW ABOUT TERMS DISCUSSION INVESTING FAQS

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MIN. INVEST @
$300

INVESTORS

VALUATION
$42.05M

REASONS TO INVEST

- StemBioSys' innovative drug testing with patented lab tools allowing testing of new products with cultured human cells, not from embryos, replacing less accurate chemical tests & experimental animal models.
- StemBioSys' has established a strong foothold in the regenerative medicine industry, with partnerships with pioneering products such as CELLx™ Artificial Cardiomyocytes and our patented Matrix Plus™.
- With an experienced team, an exclusive worldwide license to patented technology, and a $1 billion dollar market in diseases such as Targeted Technology Funds, we believe StemBioSys' has the expertise needed to build product awareness worldwide.

TEAM

Robert Allen Forchner • President & Chief Executive Officer
Robert Allen Forchner, MBA, is President and Chief Executive Officer of StemBioSys. Since founding in 2011, Forchner has led the company through its IPO on the Canadian Stock Exchange in 2017 and its listing on the Nasdaq in 2021. Forchner is a seasoned with 10 FDA and the Global Food, Bio-power biomedical, or ... Show More

Mark Douglas Hamsey • Chief Financial Officer
Mark Hamsey, MBA, assisted in startup the Regenerative Holdings, Bioangus Vaccines, Bioangus Pharmaceuticals, Bioangus Medical, Bioangus Medical Supply, Bioangus Medical Bella & Economics and an MBA from St. Edwards University in Austin, Texas.Dr.J ... Show More

Xiao-Dong Chen • Board Director, Chief Scientific Officer
Xiao-Dong Chen, MD, Ph.D., a professor in stem cell research, co-founded StemBioSys' based on patented cells of 3D Health Sex Ontrac. He is serving as the company's CSO with 3 patents in development and over 70 peer-reviewed articles. Dr. Chen has been on the ... Show More

Show More

THE PITCH

Breaking Ground in Stem Cell Research

EXHIBIT D TO FORM C

VIDEO TRANSCRIPT

No Video Present.

STARTENGINE SUBSCRIPTION PROCESS (Exhibit E)

Platform Compensation

- As compensation for the services provided by StartEngine Capital, the issuer is required to pay to StartEngine Capital a fee consisting of a 5.5-13% (five and one-half to thirteen) commission based on the dollar amount of securities sold in the Offering and paid upon disbursement of funds from escrow at the time of closing. The commission is paid in cash and in securities of the Issuer identical to those offered to the public in the Offering at the sole discretion of StartEngine Capital. Additionally, the issuer must reimburse certain expenses related to the Offering. The securities issued to StartEngine Capital, if any, will be of the same class and have the same terms, conditions, and rights as the securities being offered and sold by the issuer on StartEngine Capital's website.

- As compensation for the services provided by StartEngine Capital, investors are also required to pay StartEngine Capital a fee consisting of a 0-3.5% (zero to three and a half percent) service fee based on the dollar amount of securities purchased in each investment.

Information Regarding Length of Time of Offering

- Investment Cancellations: Investors will have up to 48 hours prior to the end of the offering period to change their minds and cancel their investment commitments for any reason. Once within 48 hours of ending, investors will not be able to cancel for any reason, even if they make a commitment during this period.

- Material Changes: Material changes to an offering include but are not limited to: A change in minimum offering amount, change in security price, change in management, material change to financial information, etc. If an issuer makes a material change to the offering terms or other information disclosed, including a change to the offering deadline, investors will be given five business days to reconfirm their investment commitment. If investors do not reconfirm, their investment will be canceled and the funds will be returned.

Hitting The Target Goal Early & Oversubscriptions

- StartEngine Capital will notify investors by email when the target offering amount has hit 25%, 50%, and 100% of the funding goal. If the issuer hits its goal early, the issuer can create a new target deadline at least 5 business days out. Investors will be notified of the

new target deadline via email and will then have the opportunity to cancel up to 48 hours before the new deadline.

- Oversubscriptions: We require all issuers to accept oversubscriptions. This may not be possible if: 1) it vaults an issuer into a different category for financial statement requirements (and they do not have the requisite financial statements); or 2) they reach $5M in investments. In the event of an oversubscription, shares will be allocated at the discretion of the issuer, with priority given to StartEngine Owners Bonus members.

- If the sum of the investment commitments does not equal or exceed the target offering amount at the offering deadline, no securities will be sold in the offering, investment commitments will be canceled and committed funds will be returned.

- If a StartEngine issuer reaches its target offering amount prior to the deadline, it may conduct an initial closing of the offering early if they provide notice of the new offering deadline at least five business days prior to the new offering deadline (absent a material change that would require an extension of the offering and reconfirmation of the investment commitment). StartEngine will notify investors when the issuer meets its target offering amount. Thereafter, the issuer may conduct additional closings until the offering deadline.

Minimum and Maximum Investment Amounts

- In order to invest, commit to an investment or communicate on our platform, users must open an account on StartEngine Capital and provide certain personal and non-personal information including information related to income, net worth, and other investments.

- Investor Limitations: There are no investment limits for investing in crowdfunding offerings for accredited investors. Non-accredited investors are limited in how much they can invest in all crowdfunding offerings during any 12-month period. The limitation on how much they can invest depends on their net worth (excluding the value of their primary residence) and annual income. If either their annual income or net worth is less than $124,000, then during any 12-month period, they can invest either $2,500 or 5% of their annual income or net worth, whichever is greater. If both their annual income and net worth are equal to or more than $124,000, then during any 12-month period, they can invest up to 10% of annual income or net worth, whichever is greater, but their investments cannot exceed $124,000.

EXHIBIT F TO FORM C

ADDITIONAL CORPORATE DOCUMENTS

[See attached]

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "STEMBIOSYS, INC.", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF MAY, A.D. 2024, AT 2:23 O`CLOCK P.M.

5175109 8100
SR# 20242636096

Authentication: 203605367
Date: 05-31-24

You may verify this certificate online at corp.delaware.gov/authver.shtml

STEMBIOSYS, INC.
FOURTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

StemBioSys, Inc., a corporation organized and existing under the laws of the State of Delaware (the "**Corporation**"), hereby certifies as follows:

1. The name of the Corporation is StemBioSys, Inc. The Corporation filed its original Certificate of Incorporation with the Delaware Secretary of State on June 25, 2012.

2. This Fourth Amended and Restated Certificate of Incorporation has been duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of Delaware by the directors and stockholders of the Corporation.

3. The text of the Certificate of Incorporation is amended and restated to read as set forth in EXHIBIT A attached hereto.

IN WITNESS WHEREOF, StemBioSys, Inc. has caused this Fourth Amended and Restated Certificate of Incorporation to be signed by Bob Hutchens, a duly authorized officer of the Corporation, on May 29th, 2024.

/s/ Bob Hutchens
Bob Hutchens, Chief Executive Officer

State of Delaware
Secretary of State
Division of Corporations
Delivered 02:23 PM 05/30/2024
FILED 02:23 PM 05/30/2024
SR 20242636096 - File Number 5175109

Exhibit A

ARTICLE I

The name of this corporation is StemBioSys, Inc. (the "**Corporation**").

ARTICLE II

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the "**DGCL**").

ARTICLE III

The address of the Corporation's registered office in the State of Delaware is 850 New Burton Road, Dover, Delaware 19904, Kent County. The name of its registered agent at such address is Cogency Global, Inc.

ARTICLE IV

This Corporation is authorized to issued two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares of capital stock that this Corporation shall have authority to issue is 27,200,000. The total number of shares of Common Stock this Corporation shall have authority to issue is 16,200,000 with par value of $0.0001 per share (the "**Common Stock**"). The total number of shares of Preferred Stock (the "**Preferred Stock**") this Corporation shall have authority to issue is 11,000,000, of which 4,000,000 shall be designated Series A Preferred Stock, par value $.10 per share (the "**Series A Preferred Stock**"), 2,600,000 shall be designated Series B Preferred Stock, par value $.10 per share (the "**Series B Preferred Stock**"), 2,600,000 shall be designated Series C Preferred Stock, par value $.10 per share (the "**Series C Preferred Stock**"), and 1,800,000 shall be designated Series C-1 Preferred Stock, par value $.10 per share (the "**Series C-1 Preferred Stock**").

The relative rights, preferences, privileges, limitations and restrictions granted to or imposed on the respective classes and series of the shares of capital stock or the holders thereof are as follows:

4.1 *Common Stock.* The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights of the holders of the Preferred Stock. The holders of the Common Stock are entitled to one vote for each share held by such holder. There shall be no cumulative voting. Dividends may be declared and paid on the Common Stock from funds lawfully available therefor as and when determined by the Board of Directors and subject to any preferential dividend rights of any then outstanding Preferred Stock. Upon the dissolution or liquidation of the Corporation, whether voluntary or involuntary, holders of the Common Stock will be entitled to receive ratably all assets of the Corporation available for distribution to stockholders, subject to any preferential and participation rights of any then outstanding Preferred Stock.

4.2 *Preferred Stock.*

(A) *Definitions*. Unless the context otherwise requires, the terms defined in this Section 4.2(A) shall have, for all purposes of this Section 4.2, the meanings specified (with terms defined in the singular having comparable meanings when used in the plural).

(1) "**Affiliate**" means, with respect to any person, any other person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified person and, in the case of a person who is an individual, shall include, without limitation, (i) members of such specified person's immediate family (as defined in Instruction 1 of Item 404(a) of Regulation S K under the Securities Act) and (ii) trusts, the trustee and all beneficiaries of which are such specified person or members of such person's immediate family as determined in accordance with the foregoing clause (i). For the purposes of this definition, "control," when used with respect to any person means the power to direct the management and policies of such person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms "affiliated," "controlling" and "controlled" have meanings correlative to the foregoing.

(2) "**Board of Directors**" means the Board of Directors of the Corporation.

(3) "**Common Stock**" has the meaning set forth in the first paragraph of this Article IV.

(4) "**Conversion Date**" has the meaning ascribed to such term in Section 4.2(E)(5).

(5) "**Conversion Price**" means the Original Purchase Price of the applicable series of Preferred Stock, subject to adjustment from time to time in accordance with Section 4.2(E)(4).

(6) "**Convertible Securities**" means any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(7) "**Effective Date**" means the date this Restated Certificate is filed with the Secretary of State of the State of Delaware.

(8) "**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(9) "**Excluded Securities**" means:

(a) shares of Common Stock granted or issued to officers, directors or employees of, or consultants to, the Corporation pursuant to a stock grant, stock option plan, employee stock purchase plan, restricted stock plan or other similar plan or agreement or otherwise, in each case as approved by the Board of Directors, in an amount not to

exceed in the aggregate 2,600,000 shares (subject to appropriate adjustment for any stock dividend, stock split, combination or other similar recapitalization affecting such shares);

(b) shares of Common Stock granted or issued to persons or entities with whom the Corporation has business relationships, including, without limitation, under equipment leasing arrangements, bank or other institutional loans, strategic partnerships, licensing agreements or collaborations, acquisitions of companies or product lines or other arrangements or transactions wherein the principal purpose of the issuance of such shares (or rights, warrants or options) is for non-equity financing purposes; provided, that such issuance is approved by the majority vote or written consent of the whole Board of Directors (including a majority of the Preferred Directors);

(c) shares issued or issuable as a result of any stock split, combination, dividend, distribution, reclassification, exchange or substitution for which an equitable adjustment is provided for in Section 4.2(E)(4);

(d) Options outstanding on the Effective Date and the securities issuable upon exercise, exchange or conversion thereof;

(e) securities issued upon the exercise, exchange or conversion of Options;

(f) Convertible Securities outstanding on the Effective Date and the securities issuable upon exercise, exchange or conversion thereof

(g) securities issued upon the exercise, exchange or conversion of Convertible Securities;

(h) shares of Series C-1 Preferred Stock;

(i) shares of Common Stock issued or issuable upon conversion of any series of Preferred Stock;

(j) shares of Common Stock issued as a dividend or distribution on the Preferred Stock;

(k) Options exercisable for up to 200,000 shares of Series C Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock) and the Convertible Securities issued upon exercise thereof; and

(l) securities issued or issuable with the written consent of the Requisite Holders, whether such consent is obtained before or after such issuance.

(10) "**GAAP**" means U.S. generally accepted accounting principles as set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the

Financial Accounting Standards Board, which are in effect from time to time, consistently applied.

(11) "**Options**" means rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities. For purposes hereof, a Safe Agreement for Future Equity (aka a "SAFE") is an Option and is a right to acquire Common Stock or Convertible Securities.

(12) "**Original Purchase Price**" means $2.00 per share for the Series A Preferred Stock, $2.50 per share for the Series B Preferred Stock, $3.00 per share for the Series C Preferred Stock and $3.00 per share for the Series C-1 Preferred Stock, each subject to appropriate adjustment for any stock dividend, stock split, combination or other similar recapitalization affecting such shares.

(13) "**person**" means any individual, partnership, company, limited liability company, joint venture, association, joint stock company, trust, unincorporated organization, government or agency or political subdivision thereof, or other entity.

(14) "**Preferred Stock**" has the meaning set forth in the first paragraph of this Article IV.

(15) "**Preferred Directors**" has the meaning set forth in Section 4.2(B)(3).

(16) "**Qualified IPO**" has the meaning set forth in Section 4.2(E)(2).

(17) "**Requisite A Holders**" means the holders of at least a majority of the then outstanding shares of Series A Preferred Stock.

(18) "**Requisite B Holders**" means the holders of at least a majority of the then outstanding shares of Series B Preferred Stock.

(19) "**Requisite C Holders**" means the holders of at least a majority of the then outstanding shares of Series C Preferred Stock.

(20) "**Requisite C-1 Holders**" means the holders of at least a majority of the then outstanding shares of Series C-1 Preferred Stock.

(21) "**Requisite Holders**" means the holders of at least a majority of the then outstanding shares of Preferred Stock.

(22) "**Restated Certificate**" means this Fourth Amended and Restated Certificate of Incorporation, as amended from time to time.

(23) "**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

(24) "**Series A Preferred Stock**" has the meaning set forth in the first paragraph of this Article IV.

(25) "**Series B Preferred Stock**" has the meaning set forth in the first paragraph of this Article IV.

(26) "**Series C Preferred Stock**" has the meaning set forth in the first paragraph of this Article IV.

(27) "**Series C-1 Preferred Stock**" has the meaning set forth in the first paragraph of this Article IV.

(28) "**subsidiary**" means, with respect to any person, (a) a company a majority of whose capital stock with voting power, under ordinary circumstances, to elect directors is at the time, directly or indirectly, owned by such person, by a subsidiary of such person, or by such person and one or more subsidiaries of such person, (b) a partnership in which such person or a subsidiary of such person is, at the date of determination, a general partner of such partnership, or (c) any other person (other than a company) in which such person, a subsidiary of such person or such person and one or more subsidiaries of such person, directly or indirectly, at the date of determination thereof, has (i) at least a majority ownership interest, (ii) the power to elect or direct the election of the directors or other governing body of such person, or (iii) the power to direct or cause the direction of the affairs or management of such person. For purposes of this definition, a person is deemed to own any capital stock or other ownership interest if such person has the right to acquire such capital stock or other ownership interest, whether through the exercise of any purchase option, conversion privilege or similar right.

(29) "**Subsidiary**" means a subsidiary of the Corporation.

(B) *Voting Rights.*

(1) *General.* Except as otherwise expressly provided herein or as required by law, the holders of Preferred Stock and the holders of Common Stock shall vote together and not as separate classes. Each holder of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which the shares of Preferred Stock held by such holder could be converted as of the record date for determining the stockholders of the Corporation eligible to vote on any such matter or, if no such record date is established, at the date such vote is taken or any written consent of stockholders is solicited. Fractional votes shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares into which shares of Preferred Stock held by each holder could be converted), shall be disregarded. Holders of Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation. There shall be no cumulative voting. The provisions of this Section 4.2(B) shall not limit or restrict any rights which any holder of Preferred Stock may have under the DGCL.

(2) *Waivers.* Except to the extent otherwise provided in this Restated Certificate or required by the DGCL, (a) the Requisite A Holders may, via affirmative vote or written consent in lieu thereof, waive any rights of the holders of Series A Preferred Stock set

forth in this Restated Certificate, (b) the Requisite B Holders may, via affirmative vote or written consent in lieu thereof, waive any rights of the holders of Series B Preferred Stock set forth in this Restated Certificate, (c) the Requisite C Holders may, via affirmative vote or written consent in lieu thereof, waive any rights of the holders of Series C Preferred Stock set forth in this Restated Certificate, (d) the Requisite C-1 Holders may, via affirmative vote or written consent in lieu thereof, waive any rights of the holders of Series C-1 Preferred Stock set forth in this Restated Certificate and (e) the Requisite Holders may, via affirmative vote or written consent in lieu thereof, waive any rights of the holders of Preferred Stock set forth in this Restated Certificate.

(3) *Board of Directors*. The number of members constituting the Board of Directors on the date hereof is ten (10). Subject to compliance with Subsection 4.2(B)(4), the number of members constituting the Board of Directors may be changed as provided in the Bylaws of the Corporation. For so long as at least 400,000 shares of Series A Preferred Stock remain outstanding (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock), the holders of Series A Preferred Stock, voting as a separate class, shall be entitled to elect three (3) members of the Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors (the "**Preferred Directors**"). Any additional members of the Board of Directors shall be elected by the holders of Common Stock and Preferred Stock, voting together as a single class (each an "**Additional Director**"). Each director shall serve until the annual meeting of stockholders of the Corporation at which the term of other directors expires, unless sooner removed or his or her earlier resignation or death, and until his respective successor shall be elected and shall qualify. Subject to the terms of any applicable voting agreement, (a) a Preferred Director may be removed by, and shall not be removed other than by, the vote of the Requisite A Holders, and (b) if for any reason there is not a Preferred Director, by reason of death, resignation, retirement, disqualification, removal or otherwise, such vacancy shall be filled by the Requisite A Holders. If a vacancy on the Board of Directors is to be filled by the Board of Directors, only directors elected by the same class or series of stockholders as those who would be entitled to vote to fill such vacancy shall vote to fill such vacancy.

(4) *Protective Provisions*.

(a) Series A Preferred Stock Protective Provisions. At any time that there is at least 1,000,000 shares of Series A Preferred Stock outstanding (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock), the Corporation will not, and will not permit any of its Subsidiaries to, directly or indirectly, without the affirmative vote (or written consent as permitted by the DGCL, this Restated Certificate and the Bylaws) of the Requisite A Holders voting (or consenting) as a separate class:

(i) amend, alter or repeal any provision of this Restated Certificate or the Bylaws of the Corporation (including pursuant to a merger) if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of, the Series A Preferred Stock;

(ii) increase or decrease the number of authorized shares of Series A Preferred Stock; or

(iii) agree to any restriction on the Corporation's ability to satisfy its obligations hereunder to holders of Series A Preferred Stock or the Corporation's ability to honor the exercise of any rights of the holders of the Series A Preferred Stock.

(b) Series B Preferred Stock Protective Provisions. At any time there is at least 1,000,000 shares of Series B Preferred Stock outstanding (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock), the Corporation will not, and will not permit any of its Subsidiaries to, directly or indirectly, without the affirmative vote (or written consent as permitted by the DGCL, this Restated Certificate and the Bylaws) of the Requisite B Holders voting (or consenting) as a separate class:

(i) amend, alter or repeal any provision of this Restated Certificate or the Bylaws of the Corporation (including pursuant to a merger) if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of, the Series B Preferred Stock;

(ii) increase or decrease the number of authorized shares of Series B Preferred Stock; or

(iii) agree to any restriction on the Corporation's ability to satisfy its obligations hereunder to holders of Series B Preferred Stock or the Corporation's ability to honor the exercise of any rights of the holders of the Series B Preferred Stock.

(c) Series C Preferred Stock Protective Provisions. At any time that there is at least 500,000 shares of Series C Preferred Stock outstanding (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock), the Corporation will not, and will not permit any of its Subsidiaries to, directly or indirectly, without the affirmative vote (or written consent as permitted by the DGCL, this Restated Certificate and the Bylaws) of the Requisite C Holders voting (or consenting) as a separate class:

(i) amend, alter or repeal any provision of this Restated Certificate or the Bylaws of the Corporation (including pursuant to a merger) if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of, the Series C Preferred Stock;

(ii) increase or decrease the number of authorized shares of Series C Preferred Stock; or

(iii) agree to any restriction on the Corporation's ability to satisfy its obligations hereunder to holders of Series C Preferred Stock or the Corporation's ability to honor the exercise of any rights of the holders of the Series C Preferred Stock.

(d) Series C-1 Protective Provisions. At any time that there is at least 500,000 shares of Series C-1 Preferred Stock outstanding (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C-1 Preferred Stock), the Corporation will not, and will not permit any of its Subsidiaries to, directly or indirectly, without the affirmative vote (or written consent as permitted by the DGCL, this Restated Certificate and the Bylaws) of the Requisite C-1 Holders voting (or consenting) as a separate class:

(i) amend, alter or repeal any provision of this Restated Certificate or the Bylaws of the Corporation (including pursuant to a merger) if such action would adversely alter the rights, preferences, privileges or powers of, or restrictions provided for the benefit of, the Series C-1 Preferred Stock;

(ii) increase or decrease the number of authorized shares of Series C-1 Preferred Stock; or

(iii) agree to any restriction on the Corporation's ability to satisfy its obligations hereunder to holders of Series C-1 Preferred Stock or the Corporation's ability to honor the exercise of any rights of the holders of the Series C-1 Preferred Stock.

(e) Preferred Stock Protective Provisions. At any time there is at least 1,000,000 shares of Preferred Stock outstanding (subject, without duplication, to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Preferred Stock), the Corporation will not, and will not permit any of its Subsidiaries to, directly or indirectly, without the affirmative vote (or written consent as permitted by the DGCL, this Restated Certificate and the Bylaws) of the Requisite Holders voting (or consenting) as a separate class:

(i) directly or indirectly declare or pay any dividend or make any distribution (whether in cash, shares of capital stock of the Corporation, or other property) on shares of capital stock of the Corporation (except with respect to shares of Preferred Stock in accordance with the terms of this Restated Certificate) or any Subsidiary (other than a wholly-owned Subsidiary), or redeem, purchase or otherwise acquire for value (including through an exchange), or set apart money or other property for any mandatory purchase or analogous fund for the redemption, purchase or acquisition of any shares of capital stock of the Corporation (except the repurchase of shares of Common Stock held by employees, officers or directors of the Corporation in accordance with stock repurchase agreements under which the Corporation has the right to repurchase such shares in the event of termination of employment at the lesser of the price paid by such person and the then current fair market value as determined in good faith by the Board of Directors) or any Subsidiary (other than a wholly-owned Subsidiary);

(ii) enter into, in a single transaction or a series of related transactions, any merger or consolidation, sale, transfer or other disposition of all or substantially all of the Corporation's assets to any person or other business combination involving the Corporation or any Subsidiary (except a merger of a wholly-owned Subsidiary into the Corporation in which the Corporation's capitalization is unchanged as a result of the merger);

(iii) effect, approve, authorize or permit a liquidation, dissolution or winding up of the Corporation or any Subsidiary or any recapitalization, reorganization or sale of all or substantially all of the assets of the Corporation or any Subsidiary;

(iv) increase the total number of directors to more than ten (10) or decrease the number of directors to less than ten (10) unless: (a) approved by the holders of a majority of the shares of Common Stock and Preferred Stock, voting together as a single class; or (b) unanimously approved by the whole Board of Directors; provided that the total number of directors shall not be reduced to less than five (5) without the affirmative vote (or written consent as permitted by the DGCL, this Restated Certificate and the Bylaws) of the Requisite A Holders voting (or consenting) as a separate class;

(v) permit any Subsidiary to issue or sell, or obligate itself to issue or sell, except to the Corporation or any wholly owned Subsidiary, any equity securities or securities exercisable or exchangeable for, or convertible into, equity securities of such Subsidiary; or

(vi) authorize, create, designate, issue or sell any (i) class or series of capital stock (including shares of treasury stock), (ii) right, options, warrants or other securities convertible into or exercisable or exchangeable for capital stock or (iii) any debt security which by its terms is convertible into or exchangeable for any equity security or has any other equity feature or any security that is a combination of debt and equity, that, in each case (whether clause (i), (ii) or (iii)), is on parity with or senior to any then-outstanding series of Preferred Stock.

(5) *Adjustment in Authorized Common Stock.* As allowed by Section 242(b)(2) of the DGCL, the number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares of Common Stock then outstanding) by an affirmative vote of the holders of a majority of the stock of the Corporation entitled to vote, voting on an as-converted to Common Stock basis.

(C) *Dividends.*

(1) *Preferred Dividends.* The holders of the Preferred Stock shall be entitled to receive dividends when, as and if declared by the Board of Directors, out of any assets legally available therefor, prior and in preference to any declaration or payment of any dividend (other than dividends on shares of Common Stock payable in shares of Common Stock) on any the Corporation's Common Stock or other series of Preferred Stock at the rate per annum of (i) in the case of Series A Preferred Stock, $0.10 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock) (the "**Series A Dividend**"), (b) in the case of Series B Preferred Stock, $0.125 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock) (the "**Series B Dividend**"), (c) in the case of Series C Preferred Stock, $0.15 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock) (the "**Series C Dividend**"), and (d) in the case of Series C-1 Preferred Stock, $0.15 per share (subject

to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C-1 Preferred Stock) (the "**Series C-1 Dividend**"), and together with the Series A Dividend, the Series B Dividend and the Series C Dividend, the "**Preferred Dividend**"). The right to receive the Series A Dividend, the Series B Dividend, the Series C Dividend or the Series C-1 Dividend, as applicable, shall be cumulative and shall begin to accrue on each share of Series A Preferred Stock, each share of Series B Preferred Stock, each share of Series C Preferred Stock and each share of Series C-1 Preferred Stock from and after the date of issuance of such share. No dividends shall be declared or paid, and no distribution shall be made, on any shares of Common Stock or other series of Preferred Stock unless all accrued but unpaid Preferred Dividends have been paid or set apart for payment. Upon conversion of any share of any series of Preferred Stock pursuant Sections 4.2(E)(1) or 4.2(E)(2), all dividends declared or accrued but unpaid on such share shall be paid, at the election of the Board of Directors, either (a) in cash, (b) in shares of Common Stock at the then fair market value as determined in good faith by the Board of Directors, or (c) a combination of cash and such shares of Common Stock.

(2) *Additional Dividends*. Other than the declaration, setting aside and payment of the Preferred Dividends, the Corporation shall not declare, pay or set aside any dividends on shares of any class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Restated Certificate) the holders of Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of such series of Preferred Stock held by such holder in an amount at least equal to (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of such series of Preferred Stock held by such holder as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of such share of Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of such series of Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (2) multiplying such fraction by an amount equal to the applicable Original Issue Price; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Preferred Stock pursuant to this Subsection (b)(ii) shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest dividend payable with respect to such series of Preferred Stock.

(D) *Liquidation Preference.*

(1) *Liquidation Preference of Preferred Stock.* In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, (a "**Liquidation Event**") the holders of the Preferred Stock shall be entitled to receive, prior and in

preference to any distribution of any of the assets of the Corporation to the holders of the Common Stock by reason of their ownership thereof, an amount per share for each share of Preferred Stock held by them equal to the sum of: (i) the Original Purchase Price specified for such series of Preferred Stock; and (ii) all accrued but unpaid and all declared but unpaid dividends (if any) on such share of Preferred Stock. If upon the liquidation, dissolution or winding up of the Corporation, the assets of the Corporation legally available for distribution to its stockholders are insufficient to permit the payment to the holders of the Preferred Stock the full amounts specified in this Section 4.2(D), then the entire assets of the Corporation legally available for distribution to its stockholders shall be distributed with equal priority and pro rata among the holders of the Preferred Stock in proportion to the full amounts they are entitled to receive pursuant to this Section 4.2(D).

Unless otherwise determined by the Requisite Holders, for the purposes of this Section 4.2(D), a Liquidation Event shall be deemed to include without limitation (A) the acquisition of the Corporation by another entity by means of any transaction or series of related transactions (including, without limitation, any merger, consolidation, share exchange or other form of reorganization in which outstanding shares of the Corporation are exchanged for securities or other consideration issued, or caused to be issued, by the acquiring entity or its subsidiary, but excluding any transaction effected primarily for the purposes of raising capital, issuing debt or changing the Corporation's jurisdiction of incorporation), unless the Corporation's stockholders of record as constituted immediately prior to such transaction or series of related transactions will, immediately after such transaction or series of related transactions hold at least a majority of the voting power of the surviving or acquiring entity, (B) a sale of all or substantially all of the assets of the Corporation (determined on a consolidated basis with all the Corporation's direct and indirect Subsidiaries), or (C) the grant of an unlimited (by territory, field of use or market) exclusive license to all or substantially all of the Corporation's technology or intellectual property rights (determined on a consolidated basis with all the Corporation's direct and indirect Subsidiaries).

(2) *Participation with Common Stock.* After the payment or setting aside for payment to the holders of Preferred Stock of the full amounts specified in Section 4.2(D)(1), the entire remaining assets of the Corporation legally available for distribution shall be distributed pro rata to holders of the Common Stock and the Preferred Stock in proportion to the number of shares of Common Stock held by them, assuming conversion of the Preferred Stock pursuant to Section 4.2(E)(1).

(3) *Distributions Other than Cash.* Whenever the distribution provided for in this Section 4.2(D) shall be payable in property other than cash, the value of such property shall be the fair market value thereof as determined in good faith by the Board of Directors.

(E) *Conversion.*

(1) *General.* Subject to and upon compliance with the provisions of this Section 4.2(E), each holder of shares of Preferred Stock shall be entitled, at its option, at any time, to convert all or any such shares of Preferred Stock into the number of fully paid and non-assessable shares of Common Stock equal to the number obtained by dividing (i) the Original Purchase Price of such series of Preferred Stock by (ii) the Conversion Price for such series of

Preferred Stock in effect at the close of business on the Conversion Date. Additionally, in connection with a conversion pursuant to this Section 4.2(E)(1) or Section 4.2(E)(2), the holder of such converting shares shall also be entitled to receive the payment contemplated by Section 4.2(C)(1).

(2) *Automatic Conversion.* All shares of Preferred Stock shall be automatically converted into the number of shares of Common Stock into which such shares of Preferred Stock are then convertible pursuant to Section 4.2(E)(1) without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent immediately upon the closing of an underwritten firm commitment public offering pursuant to an effective registration statement under the Securities Act in which the gross proceeds to the Corporation are not less than $25,000,000 at a per share price of not less than $10 (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock) (a "**Qualified IPO**") or (ii) the election of the holders owning at least two-thirds (2/3) of the then outstanding shares of Preferred Stock.

(3) *Fractions of Shares.* No fractional shares of Common Stock shall be issued upon conversion of Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the then fair market value of a share of Common Stock as determined in good faith by the Board of Directors. For such purpose, all shares of Preferred Stock held by a holder of Preferred Stock shall be aggregated and any resulting fractional share of Common Stock shall be paid in cash.

(4) *Adjustments to Conversion Price.*

(a) The Conversion Price for each series of Preferred Stock shall also be subject to adjustment from time to time as follows:

If the Corporation shall, at any time or from time to time after the Effective Date, issue (or be deemed to have issued in accordance with Section 4.2(E)(4)(b)) any shares of Common Stock (other than Excluded Securities), without consideration or for consideration per share less than the Conversion Price for such series of Preferred Stock in effect immediately prior to such issuance, then the Conversion Price for such series of Preferred Stock shall forthwith be lowered (but in no event increased) to a price equal to the amount determined by multiplying such Conversion Price by a fraction:

(i) the numerator of which shall be (1) the number of shares of Common Stock outstanding immediately prior to the issuance of such additional shares of Common Stock (calculated on a fully-diluted basis assuming the exercise or conversion of all Options and Convertible Securities) plus (2) the number of shares of Common Stock which the gross aggregate consideration, if any, received by the Corporation for the total number of such additional shares of Common Stock so issued would purchase at the Conversion Price in effect immediately prior to such issuance, and

(ii) the denominator of which shall be (1) the number of shares of Common Stock outstanding immediately prior to the issuance of such additional shares

of Common Stock (calculated on a fully-diluted basis assuming the exercise or conversion of all Options and Convertible Securities) plus (2) the number of such additional shares of Common Stock so issued or deemed issued.

Any such adjustment shall become effective immediately after the opening of business on the day following the issuance or deemed issuance of such shares of Common Stock.

(b) For the purposes of any adjustment of a Conversion Price pursuant to this Section 4.2(E)(4), the following provisions shall be applicable:

(i) In the case of the issuance or deemed issuance of Common Stock for cash in a public offering or private placement, the consideration shall be deemed to be the amount of cash paid therefor after deducting therefrom any discounts, commissions or placement fees payable by the Corporation to any underwriter or placement agent in connection with the issuance and sale thereof.

(ii) In the case of the issuance or deemed issuance of Common Stock for a consideration in whole or in part other than cash, the consideration other than cash shall be deemed to be the fair market value thereof as determined in good faith by the Board of Directors.

(iii) In the case of the issuance or deemed issuance of options to purchase or rights to subscribe for Common Stock, securities by their terms convertible into or exchangeable for Common Stock, or options to purchase or rights to subscribe for such convertible or exchangeable securities, except for Options to acquire Excluded Securities:

a. the aggregate maximum number of shares of Common Stock deliverable upon exercise of such options to purchase or rights to subscribe for Common Stock shall be deemed to have been issued at the time such options or rights were issued and for a consideration equal to the consideration (determined in the manner provided in subparagraphs (i) and (ii) above), if any, received by the Corporation upon the issuance of such options or rights plus the minimum purchase price provided in such options or rights for the Common Stock covered thereby;

b. the aggregate maximum number of shares of Common Stock deliverable upon conversion of or in exchange for any such convertible or exchangeable securities or upon the exercise of options to purchase or rights to subscribe for such convertible or exchangeable securities and subsequent conversion or exchange thereof shall be deemed to have been issued at the time such securities, options, or rights were issued and for a consideration equal to the consideration received by the Corporation for any such securities and related options or rights (excluding any cash received on account of accrued interest or accrued dividends), plus the minimum additional consideration, if any, to be received by the Corporation upon the conversion or exchange of such securities or the exercise of any related options or rights (the consideration in each case to be determined in the manner provided in subparagraphs (i) and (ii) above);

c. on any change in the number of shares of Common Stock deliverable upon the exercise of any such options or rights or conversions of or exchanges for such securities or exercise price therefor, other than a change resulting from the anti-dilution provisions thereof (including, without limitation, as a result of a stock dividend, stock split or stock combination), the applicable Conversion Price shall forthwith be readjusted to such Conversion Price as would have been obtained had the adjustment made upon the issuance of such options, rights or securities not exercised, exchanged or converted prior to such change, or options or rights related to such securities not exercised, exchanged or converted prior to such change, been made upon the basis of such change;

d. upon the expiration of any such options or the termination of any rights, convertible securities or exchangeable securities, the applicable Conversion Price shall forthwith be readjusted to such Conversion Price as would have been in effect at the time of such expiration or termination had such options, rights, convertible securities or exchangeable securities, to the extent outstanding immediately prior to such expiration or termination, never been issued; and

e. no further adjustment of the Conversion Price adjusted upon the issuance of any such options, rights, convertible securities or exchangeable securities shall be made as a result of the actual issuance of Common Stock on the exercise of any such rights or options or any conversion or exchange of any such securities.

(c) *Upon Stock Dividends, Subdivisions or Splits*. If, at any time after the date hereof, the number of shares of Common Stock outstanding is increased by a stock dividend payable in shares of Common Stock or by a subdivision or split up of shares of Common Stock, then, following the record date for the determination of holders of Common Stock entitled to receive such stock dividend, or to be affected by such subdivision or split up, the Conversion Price for each series of Preferred Stock shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of such series of Preferred Stock shall be increased in proportion to such increase in outstanding shares.

(d) *Upon Combinations*. If, at any time after the date hereof, the number of shares of Common Stock outstanding is decreased by a combination of the outstanding shares of Common Stock into a smaller number of shares of Common Stock, then, following the record date to determine shares affected by such combination, the Conversion Price for each series of Preferred Stock shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of such series of Preferred Stock shall be decreased in proportion to such decrease in outstanding shares.

(e) *Capital Reorganization, Merger or Sale of Assets*. If at any time or from time to time there shall be a capital reorganization of the Common Stock (other than a subdivision, combination, reclassification, or exchange of shares provided for elsewhere in this Section 4.2(E)) or a merger or consolidation of the Corporation with or into another corporation, or the sale of all or substantially all of the Corporation's properties and assets to any other person, then, as a part of such reorganization, merger, or consolidation or sale, provision

shall be made so that each holder of Preferred Stock shall thereafter be entitled to receive upon conversion of the Preferred Stock held by such holder, the number of shares of stock or other securities or property of the Corporation, or of the successor corporation resulting from such merger, consolidation or sale, to which such holder would have been entitled if such holder had converted its shares of Preferred Stock immediately prior to such capital reorganization, merger, consolidation or sale. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section 4.2(E) with respect to the rights of the holders of the Preferred Stock after the reorganization, merger, consolidation or sale to the end that the provisions of this Section 4.2(E), including adjustment of the Conversion Price then in effect for the applicable series of Preferred Stock and the number of shares issuable upon conversion of the applicable series of Preferred Stock) shall be applicable after that event in as nearly equivalent a manner as may be practicable. The provisions of this subsection (e) shall not apply to a Liquidation Event.

(f) *Other Distributions*. In the event the Corporation shall declare a dividend payable in securities of other persons, evidences of indebtedness issued by this Corporation or other persons, assets (excluding cash dividends) or options or rights not referred to in Section 4.2(E)(4)(b)(iii), then, in each such case for the purpose of this subsection (f), the holders of Preferred Stock shall be entitled to a proportionate share of any such dividend as though they were the holders of the number of shares of Common Stock of the Corporation into which their respective shares of Preferred Stock are convertible as of the record date fixed for the determination of the holders of Common Stock of the Corporation entitled to receive such dividend.

(g) *Deferral in Certain Circumstances*. In any case in which the provisions of this Section 4.2(E) shall require that an adjustment shall become effective immediately after a record date of an event, the Corporation may defer until the occurrence of such event (1) issuing to the holder of any Preferred Stock converted after such record date and before the occurrence of such event the shares of capital stock issuable upon such conversion by reason of the adjustment required by such event and issuing to such holder only the shares of capital stock issuable upon such conversion before giving effect to such adjustments, and (2) paying to such holder any amount in cash in lieu of a fractional share of capital stock pursuant to Section 4.2(E)(3) above; *provided, however*, that the Corporation shall deliver to such holder an appropriate instrument or due bills evidencing such holder's right to receive such additional shares and such cash.

(5) *Exercise of Conversion Privilege*. In order to exercise the conversion privilege, the holder of any share of Preferred Stock shall surrender the certificate evidencing such share of Preferred Stock, duly endorsed or assigned to the Corporation in blank, at any office or agency of the Corporation maintained for such purpose, accompanied by written notice to the Corporation at such office or agency that the holder elects to convert such Preferred Stock or, if less than the entire amount thereof is to be converted, the portion thereof to be converted. Preferred Stock shall be deemed to have been converted immediately prior to the close of business on the date (the "**Conversion Date**") of (i) the event triggering automatic

conversion pursuant to Section 4.2(E)(2) or (ii) surrender of such shares of Preferred Stock for conversion in accordance with the foregoing provisions, and at such time the rights of the holder of such shares of Preferred Stock as a holder thereof shall cease, and the person or persons entitled to receive the Common Stock issuable upon conversion shall be treated for all purposes as the record holder or holders of such Common Stock as and after such time. As promptly as practicable on or after the Conversion Date, the Corporation shall issue and shall deliver at any office or agency of the Corporation maintained for the surrender of Preferred Stock a certificate or certificates for the number of full shares of Common Stock issuable upon conversion, together with payment in lieu of any fraction of a share as provided in Section 4.2(E)(3) and any payments required by Section 4.2(C)(1). In the case of any certificate evidencing shares of Preferred Stock that is converted in part only, upon such conversion the Corporation shall also execute and deliver a new certificate evidencing the number of shares and series of Preferred Stock that are not converted.

(6) *Certificate of Adjustment.* Upon the occurrence of each adjustment or readjustment of the Conversion Price pursuant to this Section 4.2(E), the Corporation at its expense shall promptly compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth: (i) such adjustments and readjustments; (ii) the Conversion Price at the time in effect; and (iii) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of such Preferred Stock.

(7) *Corporation to Reserve Common Stock.* The Corporation shall at all times reserve and keep available, free from preemptive rights, out of the authorized but unissued Common Stock or out of the Common Stock held in treasury, for the purpose of effecting the conversion of Preferred Stock, the full number of shares of Common Stock then issuable upon the conversion of all outstanding shares of Preferred Stock. Before taking any action that would cause an adjustment reducing the conversion price below the then par value (if any) of the shares of Common Stock deliverable upon conversion of a series of Preferred Stock, the Corporation will take any corporate action that, in the opinion of its counsel, is necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted conversion price. If at any time the number of authorized but unissued shares of Common Stock plus the number of shares of Common Stock held in treasury shall not be sufficient to effect the conversion of all then outstanding shares of Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose, including, without limitation, engaging its best efforts to obtain the requisite stockholder approval for any necessary amendment to this Restated Certificate.

(8) *Taxes on Conversions.* The Corporation will pay any and all original issuance, transfer, stamp and other similar taxes that may be payable in respect of the issue or delivery of shares of Common Stock on conversion of Preferred Stock pursuant hereto. The Corporation shall not, however, be required to pay any tax which may be payable in respect

of any transfer involved in the issue and delivery of shares of Common Stock in a name other than that of the holder of the share(s) of Preferred Stock to be converted, and no such issue or delivery shall be made unless and until the person requesting such issue has paid to the Corporation the amount of any such tax, or has established to the satisfaction of the Corporation that such tax has been paid.

4.3 *Status of Converted Stock.* In the event any shares of any series of Preferred Stock are converted pursuant to Section 4.2(E), the Corporation shall never again issue the shares so converted, all such shares so converted shall, upon such conversion, cease to be a part of the Corporation's authorized stock, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of such series of Preferred Stock accordingly.

4.4 *Notices.* Any notice required by the provisions of this Restated Certificate, including Section 4.2(E) to be given to the holders of shares of any series of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the DGCL, and shall be deemed sent upon such mailing or electronic transmission.

ARTICLE V

The Corporation is to have perpetual existence.

ARTICLE VI

For the management of the business and for the conduct of the affairs of the Corporation, and in further definition and not in limitation of the powers of the Corporation and of its directors and of its stockholders or any class thereof, as the case may be, conferred by the State of Delaware, it is further provided that:

A. The management of the business and the conduct of the affairs of the Corporation shall be vested in its Board of Directors. When used in this Restated Certificate, the phrase "whole Board of Directors" and the phrase "total number of directors" shall be deemed to have the same meaning, to wit, the total number of directors which the Corporation would have if there were no vacancies. No election of directors need be by written ballot.

B. The books of the Corporation may be kept at such place within or without the State of Delaware as the Bylaws of the Corporation may provide or as may be designated from time to time by the Corporation's Board of Directors.

C. Except as may otherwise be provided in this Restated Certificate, in furtherance and not in limitation of the powers conferred by the laws of the state of Delaware, the Corporation's Board of Directors is expressly authorized to make, alter, amend or repeal the Corporation's Bylaws.

ARTICLE VII

Elections of directors need not be by written ballot unless the Corporation's Bylaws shall so provide.

ARTICLE VIII

8.1 *Limitation of Director's Liability.* To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the DGCL or any other law of the State of Delaware is amended after approval by the stockholders of this Section 8.1 to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL as so amended. The provisions of this Section 8.1 are cumulative and shall be in addition to and independent of any and all other limitations on or eliminations of the liabilities of directors of the Corporation, as such, whether such limitations or eliminations arise under or are created by any law, rule, regulation, bylaw, agreement, vote of stockholders or disinterested directors, or otherwise.

8.2 *Indemnification of Directors and Officers.* The Corporation shall, to the fullest extent permitted by applicable law, including without limitation Section 145 of the DGCL, as the same may be amended and supplemented from time to time, indemnify and advance expenses to, (i) its directors and officers, and (ii) any person who at the request of the Corporation is or was serving as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, from and against any and all of the expenses, liabilities, or other matters referred to in or covered by said section as amended or supplemented (or any successor), *provided, however*, that except with respect to proceedings to enforce rights to indemnification, the Bylaws of the Corporation may provide that the Corporation shall indemnify any director, officer or such person in connection with a proceeding (or part thereof) initiated by such director, officer or such person only if such proceeding (or part thereof) was authorized by the Corporation's Board of Directors. The Corporation, by action of its Board of Directors, may provide indemnification or advance expenses to employees and agents of the Corporation or other persons only on such terms and conditions and to the extent determined by the Corporation's Board of Directors in its sole and absolute discretion. The indemnification provided for herein shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any Bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in their official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

8.3 *Repeal or Modification.* Any repeal or modification of this Article VIII by amendment of this Article VIII or by operation of law, or the adoption of any provision inconsistent with this Article VIII, shall not adversely affect any right or protection of a director, officer, employee or other agent of this Corporation existing at the time of, or increase the liability of any such person with respect to any acts or omissions in their capacity as a director, officer, employee, or other agent occurring prior to, such repeal or modification.

8.4 *Corporate Opportunities*. The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of, (i) any director of the Corporation who is not an employee of the Corporation or any of its Subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder (or an affiliate of such holder), other than someone who is an employee of the Corporation or any of its Subsidiaries (collectively, "**Covered Persons**"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation.

ARTICLE IX

Subject to Section 4.2(B)(4) of Article IV, the Corporation reserves the right to amend, alter, change or repeal any provision contained in this Restated Certificate, in the manner now or hereafter prescribed by statute and all rights conferred upon stockholders herein are granted subject to this reservation.

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