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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2022

Or

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

For the transition period from to

Commission file number 001-35817

VYANT BIO, INC.
(Exact name of registrant as specified in its charter)

Delaware	**04-3462475**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

2 Executive Campus
2370 State Route 70, Suite 310
Cherry Hill, NJ 08002
(201) 479-1357
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

Title of each class	**Trading Symbol**	**Name of each exchange on which registered**
Common Stock, $0.0001 par value per share	**VYNT**	**The Nasdaq Stock Market LLC**

Securities registered pursuant to Section 12(g) of the Act: None

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

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

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

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

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

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

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

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

that prepared or issued its audit report. ☐

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

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was $24.7 million on June 30, 2022, the last business day of the registrant's most recently completed second fiscal quarter, based on the closing price of $4.55 on that date.

Indicate the number of shares outstanding of each of the registrant's classes of common equity, as of March 15, 2023:

Class	Number of Shares
Common Stock, $.0001 par value	6,267,708

Documents incorporated by reference

None.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include all statements that are not historical facts. In some cases, you can identify forward-looking statements by terms such as "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential," or the negative of those terms, and similar words expressions and comparable terminology intended to identify forward-looking statements. These statements reflect the Company's current views with respect to future events and are based on assumptions and subject to risks and uncertainties including those set forth below and under Part I, Item 1A, "Risk Factors" in this annual report on Form 10-K. Given these uncertainties, you should not place undue reliance on these forward-looking statements. These forward-looking statements represent the Company's estimates and assumptions only as of the date of this annual report on Form 10-K and, except as required by law, the Company undertakes no obligation to update or review publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this annual report on Form 10-K. You should read this annual report on Form 10-K and the documents referenced in this annual report on Form 10-K and filed as exhibits completely and with the understanding that the Company's actual future results may be materially different from what the Company expects. The Company qualifies all of its forward-looking statements by these cautionary statements. Such statements may include, but are not limited to, statements concerning the following:

- our ability to consummate any strategic transaction, whether by acquisition, sale of any part of our business, or otherwise, and effectively operate our business during any such transaction process;
- substantial doubt about our ability to continue as a going concern;
- our cash position;
- our ability to finance operations;
- our ability to execute on our current business plans while exploring strategic alternatives;
- the ability to maintain the listing of our securities on Nasdaq, and the potential liquidity and trading of our securities;
- our ability to retain key talent;
- our ability to discover and develop novel therapeutics;
- our ability to license any therapeutics we develop to larger companies;
- our ability to deter cyberattacks on our business; and
- the impact of COVID-19 on the economy, demand for our services and products and our operations, including measures taken by government authorities to address the pandemic, which may precipitate or exacerbate other risks and/or uncertainties.

PART I

Item 1. Business.

Overview

Vyant Bio, Inc. (the "Company", "Vyant Bio", "VYNT" or "we"), incorporates innovative biology and data science to improve drug discovery for complex neurodevelopmental and neurodegenerative disorders. As noted below, in January 2023 we have ceased substantially all preclinical and clinical development activities as we complete our review of our strategic alternatives.

Our central nervous system ("CNS") drug discovery platform combines human-derived organoid models of brain disease, scaled biology, and machine learning. Our platform is designed to: 1) elucidate disease pathophysiology; 2) formulate key therapeutic hypotheses; 3) identify and validate drug targets, cellular assays, and biomarkers to guide candidate molecule selection; and 4) guide clinical trial patient selection and trial design. Our current programs are focused on identifying repurposed and novel small molecule clinical candidates for rare CNS genetic disorders including Rett Syndrome ("Rett"), CDKL5 Deficiency Disorders ("CDD") and familial Parkinson's Disease ("PD"). The Company's management believes that drug discovery needs to progressively shift as the widely used preclinical models for predicting safe and effective drugs have under-performed, as evidenced by the time and cost of bringing novel drugs to market. As a result, Vyant Bio is focused on combining sophisticated data science capabilities with highly functional human cell derived disease models. We leverage our ability to identify validated targets and molecular-based biomarkers to screen and test thousands of small molecule compounds in human diseased 3D brain organoids in order to create a unique approach to assimilating biological data that supports decision making iteratively throughout the discovery phase of drug development to identify both novel and repurposed drug candidates.

On January 4, 2023, the Company announced that it had engaged LifeSci Capital as its financial advisor to assist in exploring a range of strategic alternatives focused on enhancing shareholder value. There can be no assurance that this review process will result in any changes to the Company's current business plans or lead to any specific action or transaction.

The Company's Board of Directors (the "Board"), after an assessment of the status of the Company's efforts to seek strategic alternatives and the Company's then current cash position, approved a plan on January 31, 2023 to preserve the Company's cash to be able to continue to pursue a satisfactory strategic alternative for the purpose of maximizing the value of the Company's business while also having sufficient cash to adequately fund an orderly wind down of the Company's operations (the "Cash Preservation Plan") in the event it is unable to secure a satisfactory strategic alternative. As part of the Cash Preservation Plan, the Company implemented a reduction in force, resulting in the retention of a core group of employees required for one or more potential strategic transactions and/or to execute an orderly wind down of the Company if required. The Company also deferred pending efforts with respect to its current preclinical and clinical programs.

Further, on January 31, 2023, John A. Roberts and Robert T. Fremeau, Jr., agreed in principle that Mr. Roberts and Dr. Fremeau would step down as President and Chief Executive Officer and Chief Scientific Officer, respectively, of the Company, effective as of February 3, 2023, and pursuant to their employment agreements, would be deemed terminated as of that date by the Company without cause for purposes of determining severance thereunder. Mr. Roberts remains a member of the Board of Directors of the Company. Andrew D. C. LaFrence, the Company's Chief Financial Officer, assumed the role of President and Chief Executive Officer following Mr. Roberts' departure. Mr. LaFrence became Chief Financial Officer upon the Company's merger with StemoniX, Inc. on March 30, 2021, pursuant to the terms of an employment agreement, dated March 30, 2021, which remains in effect.

StemoniX Merger

On March 30, 2021, Vyant Bio, formerly known as Cancer Genetics, Inc. ("CGI"), completed its business combination (the "Merger") with StemoniX, Inc., a Minnesota corporation ("StemoniX"), in accordance with the Agreement and Plan of Merger and Reorganization, dated as of August 21, 2020 (the "Initial Merger Agreement") by and among the Company, StemoniX and CGI Acquisition, Inc., a Minnesota corporation and wholly-owned subsidiary of the Company ("Merger Sub"), as amended by Amendment No. 1 thereto made and entered into as of February 8, 2021 (the "First Amendment") and Amendment No. 2 thereto made and entered into as of February 26, 2021 (the "Second Amendment") (the Initial Merger Agreement, as amended by the First Amendment and Second Amendment, the "Merger Agreement"), pursuant to which Merger Sub merged with and into StemoniX, with StemoniX surviving the Merger as a wholly-owned subsidiary of the Company.

The Merger was accounted for as a reverse acquisition with StemoniX being the accounting acquirer of CGI using the acquisition method of accounting. Under acquisition accounting, the assets and liabilities (including executory contracts, commitments and other obligations) of CGI, as of March 30, 2021, the closing date of the Merger, were recorded at their respective fair values and added to those of StemoniX. Any excess of purchase price consideration over the fair values of the identifiable net assets is recorded as goodwill. The total consideration paid by StemoniX in the Merger amounted to $59.9 million, which represents the fair value of CGI's 2,201,437 shares of Common Stock or $50.74 million, 431,537 Common Stock warrants or $9.04 million and 11,181 Common Stock options outstanding on the closing date of the Merger with a fair value of $139 thousand. In addition, at the effective time of the Merger, existing StemoniX shareholders received an additional 160,942 incremental shares in accordance with the conversion ratio set forth in the Merger Agreement.

Effective with the Merger, the historical financial statements of StemoniX, as the accounting acquiror, became the historical financial statements of the Company under U.S. generally accepted accounting principles ("US GAAP") and Cancer Genetics, Inc. was renamed Vyant Bio, Inc. Therefore, the underlying operations of CGI and subsidiaries are consolidated in the Vyant Bio consolidated financial statements from March 30, 2021 onward. The discussions regarding the Company's business herein reflect the operations of StemoniX prior to the Merger as well as the post-Merger combined operations of Vyant Bio and StemoniX.

Reverse Stock Split

On July 14, 2022, the Company's stockholders approved a reverse stock split (the "Reverse Split") of the Company's issued and outstanding shares of Common Stock in the range of one for five to one for fifteen shares. On October 18, 2022, the Company's Board of Directors approved a Reverse Split of one for five shares effective November 1, 2022. As a result of the reverse split, every 5 shares of the Company's Common Stock issued and outstanding were converted into one share of Common Stock. No fractional shares were issued in connection with the reverse split. Stockholders who would otherwise be entitled to a fractional share of Common Stock instead received cash in lieu of fractional shares based on the closing sales price of the Company's Common Stock as quoted on the Nasdaq Global Market on the five trading days immediately prior to November 1, 2022. The reverse split did not reduce the number of authorized shares of the Common Stock or preferred stock (the "Preferred Stock") or change the par values of the Company's Common Stock or Preferred Stock. The Reverse Split affected all stockholders uniformly and did not affect any stockholder's ownership percentage of the Company's shares of Common Stock (except to the extent that the reverse split would result in some of the stockholders receiving cash in lieu of fractional shares). All outstanding common stock options, warrants and restricted stock units entitling their holders to receive or purchase shares of the Company's Common Stock have been adjusted as a result of the reverse split, as required by the terms of each security. All historical share and per share amounts presented herein have been retroactively adjusted to reflect the impact of the Reverse Split.

***vivo*Pharm Business**

In December 2021, the Company's Board of Directors approved the engagement of an investment banker to seek to sell the *vivo*Pharm business to allow the Company to focus on the development of neurological developmental and degenerative disease therapeutics. As of December 31, 2021, the Company commenced accounting for *vivo*Pharm as discontinuing operations. In the fourth quarter of 2022, the Company sold substantially all of the operations of *vivo*Pharm in two separate transactions. On March 13, 2023, the remaining *vivo*Pharm business was sold. For further information, see section entitled "Discontinuing Operations" later in this Part I, and Note 3, Discontinuing Operations, to the Company's Consolidated Financial Statements included in Part II. Item 8 herein.

Business Strategy

Drug Discovery

The Company's strategy has been to utilize a unique and robust "human-first" drug discovery platform to discover repurposed and novel therapeutics to treat neurodevelopmental and neurodegenerative diseases, initially focusing on rare CNS genetic disorders including Rett, CDD and familial PD. Key to the Company's strategy has been the development by utilizing human-derived induced pluripotent stem cells ("iPSC") to generate three dimensional organoids that exhibit spontaneous synchronized neuronal activity that can be detected in a high-throughput fashion. Vyant Bio has industrialized the production of iPSC-derived organoids into standard multi-well plate formats that we believe are sufficiently robust and reproducible to enable high throughput drug screening and provide insightful data for optimized selection of therapeutic candidates.

The human organoid platform is combined with software analytics and machine learning systems, branded by the Company as its proprietary AnalytiX™ system. This integrated approach enables standardized, high-throughput screening of drug candidates to establish human efficacy prior to conducting human clinical studies, mitigating or in some cases avoiding the inadequacies of testing in clonal cell lines or preclinical animal models. The Company believes that its technologies will permit drug discovery in human disease areas that are difficult to address using current methodologies, such as brain diseases, accelerate preclinical drug discovery and development, reduce risk of clinical failure, predict drug candidate efficacy with greater degrees of confidence and, ultimately, reduce the cost of discovering new therapeutic agents.

The Company began transforming its Maple Grove, Minnesota facility to a high throughput manufacturing and screening facility in the fourth quarter of 2021 to expand the Company's internal research and development capabilities. This transition is in line with the Company's strategy to leverage its iPSC technology to pursue wholly owned and partnered drug discovery projects that yield higher valued proprietary therapeutic assets. This facility transformation was substantially completed in the second half of 2022 and the Company expects nominal product sales in 2023. Previously, the Company derived revenue from the sale of iPSC-based microOrgan™ plates to pharmaceutical, biotechnology and research customers and through the performance of Discovery as a Service ("DaaS") for these customers.

Therapeutic Programs

Prior to February 2023 the Company was actively seeking to discover repurposed and novel (New Chemical Entity, or "NCE") lead candidates for Rett, CDD and familial PD which was intended to become the foundation of the Company's therapeutic platform. In February 2023, the Company placed all its preclinical and clinical development activities on hold as it evaluates its strategic alternatives.

Rett Syndrome ("Rett")

Rett is a rare genetic neurological disorder that occurs almost exclusively in girls and leads to severe impairments, affecting nearly every aspect of the child's life including their ability to speak, walk, eat, and even breathe easily. The hallmark of Rett is near constant repetitive hand movements. Rett is usually recognized in children between 6 to 18 months as they begin to miss developmental milestones or lose abilities they had gained. Rett is caused by mutations on the X chromosome in a gene called MECP2. There are more than 900 different mutations found on the MECP2 gene. Most of these mutations are found in eight different "hot spots." Rett is not a degenerative disorder with individuals living to middle age or beyond. Rett occurs worldwide in 1 of every 10,000 female births and is even rarer in boys. Rett can present with a wide range of disability ranging from mild to severe. The course and severity of Rett is determined by the location, type and severity of the mutation and X-inactivation. A 2022 report from Mellalta estimates the total global market opportunity for Rett therapeutic treatments is approximately $1.5 billion. On March 10, 2023, Acadia Pharmaceuticals announced that the United States Food and Drug Administration ("FDA") has approved DAYBUE™ (trofinetide) for the treatment of Rett syndrome in adult and pediatric patients two years of age and older. DAYBUE is the first and only drug approved for the treatment of Rett syndrome.

The Company had two programs focused on Rett, that were identified based on a phenotypic screen of the SMART library provided by the International Rett Syndrome Foundation on our Rett patient-derived organoids: Donepezil, a repurposed drug candidate (referred to as "VYNT0126") and two families of new chemical entity compounds.

Donepezil is a promising repurposed candidate for several reasons. The compound has already been approved by the FDA, including in a recently approved transdermal patch delivery system, as a cognition-enhancing medication for dementia related to Alzheimer's disease, and there is readily available safety data. It exhibits a consistent dose-dependent rescue of the functional diseased Rett phenotype on our Rett patient-derived organoids and across additional functional readouts such as multielectrode electrophysiology assays, and cellular phenotypes (synaptogenesis). The Company has engaged a contract research organization in Australia to execute a Phase II clinical trial for adult Rett patients in Australia and New Zealand. The Company has not yet enrolled patients in this trial. As part of the Company's Cash Preservation Plan in February 2023, the Company placed this clinical trial on hold. If we restart this clinical trial, we will need to evaluate the trial's scope given the recent announcement of DAYBUE's approval.

The Company was also pursuing novel compounds for Rett identified in the SMART screen in collaboration with Atomwise (as described below).

CDKL5 Deficiency Disorder ("CDD")

CDD is a neurodevelopmental condition characterized by early-onset seizures, intellectual delay, and motor dysfunction. Although crucial for proper brain development, the precise targets of CDKL5 and its relation to patients' symptoms are under investigation. Our microBrain organoid screening platform enlightens cellular, molecular, and neural network mechanisms of genetic epilepsy that we are researching to ultimately promote novel therapeutic opportunities for patients. While genetic testing is currently available to determine if patients have mutation in the *CDKL5* gene, the limited knowledge of pathology has hindered development of therapeutics, leaving CDD as an ultra-rare disease with a defined unmet medical need and no currently approved therapeutic treatments.

The Company's researchers screened approximately 5,200 custom library compounds composed of FDA approved molecules, molecules that passed Phase 1 clinical trials, and a panel of phenotypic screening compounds. This effort led to the potential to identify both internal NCE's and potential repurposing molecules. Approximately 288 compounds showed some degree of rescue of the CDD hyperexcitability phenotype, and we are conducting further confirmatory screening followed by dose response studies and pharmacologic deconvolution. In collaboration with Cyclica (as described below), we were applying machine learning to identity *in silico* molecules for screening of 3 novel CDD targets. To drive hit-to-lead optimization we are establishing *in vitro* binding and cell-based functional assays for these targets to examine the relationship between target potency and degree of phenotypic rescue.

Parkinson's Disease ("PD")

PD is a progressive neurodegenerative disorder that affects predominately dopamine-producing ("dopaminergic") neurons in a specific area of the brain called the substantia nigra. PD symptoms generally develop slowly over time and include tremors, muscle rigidity, gait and balance problems, and slow, imprecise movements. PD afflicts more than 10 million people worldwide, with 60,000 new cases per annum diagnosed in the US alone, typically middle-aged and elderly people. The market for therapeutics to treat the many symptoms and different types of Parkinson's disease is expected to expand to $7.2 billion by 2028, according to business intelligence provider Coherent Market Insights.

The etiology of PD is poorly understood but it is widely accepted that a combination of genetics and environmental factors are the cause. About 10-15 percent of people with PD have a family history of the condition, and family-linked cases can result from genetic mutations in a group of genes, including GBA, LRRK2, PARK2, PARK7, PINK1 or the SNCA gene.

Joint Venture and Collaborations

Atomwise Joint Venture

On December 3, 2019, StemoniX announced a non-exclusive joint venture with Atomwise, Inc. ("Atomwise"), a San Francisco based company, which combines StemoniX's human microOrgan platform with Atomwise's structure-based Artificial Intelligence ("AI") technology to enable the rapid discovery and development of novel small molecule therapies. The joint venture is initially targeting Rett. In the joint venture, Atomwise is using its AI technology to analyze billions of compounds *in silico* to identify potent and selective binders for proteins that are important for Rett. The Company has identified two promising families of molecules identified through this arrangement and testing related compounds on its human microBrain 3D disease model to determine biological activity. We believe this joint effort could decrease the traditional medicinal chemistry timeline as well as increase the number of promising compounds that can be tested, and thereby result in an efficient path to successful drug development. Each party owns 50% of this venture and is required to fund their respective development activities related to this arrangement. Consistent with Company's Cash Preservation Plan, we have placed on hold our development activities with Atomwise.

Cyclica Collaboration

On August 12, 2021, we entered into a non-exclusive Strategic Collaboration Agreement ("SCA") with Cyclica, Inc., a Toronto, Ontario-based company that uses a proprietary AI and machine learning ("ML") platform to identify potential new therapeutic targets, re-purposed compounds, and NCEs. In this collaboration we were focusing on identifying new targets and NCE for CDD,. The collaboration combines patient-derived neural organoids of the Company's human-first neural platform with Cyclica's in-silico platform to generate a disease-based, proteome-wide, discovery platform. The clinically linked biological signal of the CDD organoids and their responses to biologically active compounds drives the Cyclica platform to generate high-quality predictions for therapeutic targets based on their proprietary knowledge and structure-based algorithms. The predictions are tested in the Company's platform, and if verified, advanced into AI/ML-based NCE synthesis. Together the platforms enable rapid interrogation of the human proteome to accelerate the discovery of new cures for this debilitating disease and the SCA has identified four novel targets, three of which are being actively pursued under the SCA. The Company owns all inventions and discoveries resulting from the collaboration ("Work Product"). Cyclica is entitled to a decreasing percentage of any consideration that the Company receives for the sale, licensing, or other disposition of Work Product, ranging from the mid-double digits in the early preclinical stages of development down to the mid-single digits from and after late-stage clinical development. Consistent with Company's Cash Preservation Plan, we have placed on hold our development activities with Cyclica.

Competition

The pharmaceutical industry is intensely competitive, where a company's proprietary advancements in science and technology play a critical role in its competitive advantage. Any product candidates that we may successfully discover and develop, may compete with existing therapies, or new therapies that may become available in the future. Our commercial opportunities could be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer side effects, are more convenient or are less expensive than any products that we may develop.

At this time, our primary competitors are other pharmaceutical and biotechnology or biomedical development companies that are trying to discover and develop compounds to be used in the treatment of Rett, CDKL5, PD and other CNS diseases, including those companies already doing so. Some of those companies include Acadia Pharmaceuticals (NASDAQ:ACAD), Anavex Life Sciences (NASDAQ:AVXL) Biogen (NASDAQ:BIIB), Pfizer Inc. (NYSE:PFE), Abbvie Plc (NYSE:ABBV), Novartis AG (NYSE:NVS), GlaxoSmithKline Plc (NYSE:GSK), Merck & Co. Inc. (NYSE:MRK), Eli Lilly & Co. (NYSE: LLY), Johnson & Johnson (NYSE:JNJ), Roche Holding AG (VTX:ROG), Zogenix (NASDAQ:ZGNX), UCB (Euronext:UCB), Cerevel Therapeutics (NASDAQ:CERE), Corium, Inc., and Marinus Pharmaceuticals, Inc. (NASDAQ:MRNS). We also face competition from academic institutions and government agencies, both in the United States and abroad.

Intellectual Property

Patents and Trade Secrets

We protect and expand our intellectual property primarily through a combination of patent filings, trade secrets and exclusive/non-exclusive in-licensing. For processes and products that can be reverse-engineered, we typically file utility patent applications.

Regarding our patent portfolio, the Company does not rely on a singular patent to execute our business plan. Our objective is to create a significant barrier to entry for competitors by applying for patents not only on our lead products and processes but also on possible workarounds. Our intellectual property portfolio (including both owned patent applications and licensed-in technology) covers stem cells, manufacturing processes, product packaging, digital cellular electronics, cell micro-environments and structure, and cell networks. Each patent application includes its own strategy, which may involve the use of provisional patent application filings and related domestic and foreign patent applications that claim the benefits of the provisional applications and that are intended to provide the Company coverage in key geographical markets. Our patent portfolio is designed to grow with our Company.

The Company has 13 issued patents in various countries globally, defined in the table below:

TITLE	COUNTRY	APP NUMBER	PATENT NUMBER	GRANT DATE	PRIORITY DATE	PUBLICATION NUMBER
METHOD OF FABRICATING CELL ARRAYS AND USES THEREOF	Japan	2017-530976	6510649	Apr 12, 2019	Aug 28, 2014	2017532061
METHOD OF FABRICATING CELL ARRAYS AND USES THEREOF	Singapore	11201701540P	11201701540P	May 22, 2020	Aug 28, 2014	11201701540P
METHOD OF FABRICATING CELL ARRAYS AND USES THEREOF	United States of America	14/839,170	10,625,234	Apr 21, 2020	Aug 28, 2014	US20160059203A1
SURFACE ENERGY DIRECTED CELL SELF ASSEMBLY	United States of America	15/199,419	11,248,212	Feb 15, 2022	Jun 30, 2015	US20170002324A1
METHOD OF MANUFACTURING OR DIFFERENTIATING MAMMALIAN PLURIPOTENT STEM CELLSOR PROGENITOR CELLS USING A HOLLOW FIBER BIOREACTOR	United States of America	15/293,563	10,760,053	Sep 1, 2020	Oct 15, 2015	US20170107488A1
CELL MEDIUM FORMULATION FOR CELL STABILIZATION	United States of America	16/069,410	11,613,732	March 28, 2023	Jan. 12, 2016	US20190002831A1
CELL MEDIUM FORMULATION FOR CELL STABILIZATION	Switzerland	17701262.2	3402330	Dec 29, 2021	Jan 12, 2016	3402330
CELL MEDIUM FORMULATION FOR CELL STABILIZATION	Germany	17701262.2	602017051503.5	Dec 29, 2021	Jan 12, 2016	3402330
CELL MEDIUM FORMULATION FOR CELL STABILIZATION	European Patent Office	17701262.2	3402330	Dec 29, 2021	Jan 12, 2016	3402330
CELL MEDIUM FORMULATION FOR CELL STABILIZATION	France	17701262.2	3402330	Dec 29, 2021	Jan 12, 2016	3402330
CELL MEDIUM FORMULATION FOR CELL STABILIZATION	United Kingdom	17701262.2	3402330	Dec 29, 2021	Jan 12, 2016	3402330
PROJECTED CAPACITIVE MULTI ELECTRODE EUKARYOTIC CELL ARRAY	United States of America	15/588,154	11,054,408	Jul 6, 2021	May 6, 2016	US20170322194A1
HIGH THROUGHPUT OPTICAL ASSAY OF HUMAN MIXED CELL POPULATION SPHEROIDS	United States of America	16/035,039	11,193,159	Dec 7, 2021	Jul 14, 2017	US20190017097A1

We believe our combination of owned and licensed-in patents, covering both our products and processes and our ownership of intellectual property that provides protection against anticipated workarounds by potential competitors, and trade secrets is a unique advantage.

Trademarks

The Company has the following registered trademarks: StemoniX, microHeart, microBrain, microTumor, microPancreas, BeYourCure, Person-on-a-Plate, Clinical Trial on-a-Plate, microOrgan, VyantBio, Vyant Bio, and Human-powered.

Licenses

The Company licenses multiple patents and protocols from the University of California, San Diego, as well as from (1) Academia Japan for technology that we need in order to create and sell induced pluripotent stem cells, (2) ID Pharma for the Sendai virus vector technology, and (3) the Max Plank Innovation GmbH for mid-brain organoid production.

In the context of our drug development effort, whenever possible, we obtain licenses from customers to use the data we collect while providing drug screening services to those customers. We believe that this data will have significant value to our business as it refines its screening models.

IDP License Agreement

StemoniX entered into a Non-Exclusive License Agreement (the "IDP License Agreement") with ID Pharma Co., Ltd., a Japanese corporation ("IDP") effective as of January 29, 2016. Under the terms of the IDP License Agreement, IDP has granted StemoniX a royalty bearing, non-exclusive and non-transferable license in the United States and, upon exercise of the option described below, worldwide, to use the technology and processes covered by certain patents owned by IDP (the "IDP Licensed Patents") to (i) generate iPSCs covered by the IDP Licensed Patents and differentiated cells derived from such iPSCs (collectively, the "IDP Licensed Products"), (ii) sell the IDP Licensed Products that are differentiated cells, and (iii) provide services involving the IDP Licensed Products (the "IDP Licensed Services").

Pursuant to the IDP License Agreement, StemoniX agreed to pay IDP a non-credible and non-refundable up-front fee. The IDP License Agreement provides StemoniX the option, at any time during the term of the IDP License Agreement, to pay IDP an additional non-creditable and non-refundable fee in exchange for the rights to sell the IDP Licensed Products and IDP Licensed Services worldwide. Additionally, StemoniX has agreed to pay IDP a single digit percentage royalty on net sales of IDP Licensed Products sold by StemoniX. Royalties are payable within 60 days after the close of each consecutive 12-month period after the effective date of the IDP License Agreement, and annual minimum royalties apply. The IDP License Agreement may be terminated by either party upon an uncured breach of any material provision of the IDP License Agreement by the other party and under certain other circumstances.

Academia Japan License Agreement

StemoniX signed an Amended and Restated Non-Exclusive License Agreement (the "AJ License Agreement") with iPS Academia Japan, Inc., a Japanese corporation ("Academia Japan") effective as of April 1, 2017. Under the terms of the AJ License Agreement, Academia Japan has granted StemoniX a royalty bearing, non-exclusive, non-transferable license to use the technology and processes covered by two groups of patents owned by Academia Japan (collectively, the "AJ Licensed Patents") to (i) develop, make, use, sell, have sold by one or more distributors, offer to sell and have offered to sell by one or more distributors iPSCs covered by the AJ Licensed Patents and differentiated cells derived from such iPSCs (collectively, the "AJ Licensed Products"), and (ii) provide services involving the AJ Licensed Products (the "AJ Licensed Services"). Similarly, StemoniX granted Academia Japan a non-exclusive, worldwide, royalty free license to certain of its patents solely for academic and educational purposes.

Pursuant to the AJ License Agreement, StemoniX has agreed to pay Academia Japan a non-creditable and non-refundable upfront fee as well as running royalties for the AJ Licensed Patents, with single digit percentage royalties payable at varying rates depending on the applicable group of AJ Licensed Patents and the applicable group of AJ Licensed Products and/or AJ Licensed Services.

The AJ License Agreement may be terminated by Academia Japan upon a material, uncured breach of the AJ License Agreement by StemoniX, and under certain other circumstances.

Manufacturing and Supply

We do not have any manufacturing facilities or personnel for our therapeutic assets. We have manufactured microBrains at our facility in Maple Grove, Minnesota. We expect to rely on third parties to manufacture our therapeutic product candidates for preclinical and clinical testing.

Sales and Marketing

We plan to utilize third-party, specialized business development firms to support our internal staff as we pursue licenses for our proprietary disease models and, once developed, our therapeutic assets. We are currently not pursuing marketing or sales activities as we evaluate our strategic alternatives.

Government Regulation

Government authorities in the United States, at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, marketing and export and import of products such as those we are developing. A new drug must be approved by the FDA before it may be legally marketed in the United States. We are subject to various government regulations in connection with the development of our pipeline.

U.S. Drug Development and Regulation

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act and its implementing regulations ("FDCA"). The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval may subject an applicant to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

Once a drug candidate is identified for development, it enters the preclinical testing stage. Preclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies. An Investigational New Drug ("IND") sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. The sponsor must also include a protocol detailing, among other things, the objectives of the first phase of clinical trials, the parameters to be used in monitoring the safety of the trial, and the effectiveness criteria to be evaluated should the first phase lend itself to an efficacy evaluation. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective thirty (30) days after receipt by the FDA, unless the FDA, within the 30-day time period, places the clinical trial on a clinical hold. Clinical holds also may be imposed by the FDA at any time before or during clinical trials due to safety concerns about on-going or proposed clinical trials or non-compliance with specific FDA requirements, and the trials may not begin or continue until the FDA notifies the sponsor that the hold has been lifted.

All clinical trials must be conducted under the supervision of one or more qualified investigators in accordance with the FDA good clinical practice ("GCP") requirements, which include a requirement that all research subjects provide their informed consent in writing for their participation in any clinical trial. Clinical trials must be conducted under protocols detailing the objectives of the trial, dosing procedures, subject selection and exclusion criteria and the safety and/or effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND, and timely safety reports must be submitted to the FDA and the investigators for serious and unexpected adverse events. An Institutional Review Board ("IRB") at each institution participating in the clinical trial must review and approve each protocol before a clinical trial may commence at the institution and must also approve the information regarding the trial as well as the consent form that must be provided to each trial subject or his or her legal representative, monitor the study until completed and otherwise comply with all applicable IRB regulation.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined in certain cases:

Phase 1: The compound is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion and, if possible, to gain an early indication of its effectiveness. In most cases, initial Phase 1 clinical trials are conducted with healthy volunteers. However, where the compound being evaluated is for the treatment of severe or life-threatening diseases, such as cancer, and especially when the product may be too toxic to ethically administer to healthy volunteers, the initial human testing may be conducted on patients with the target disease or condition. Sponsors sometimes subdivide their Phase 1 clinical trials into Phase 1a and Phase 1b clinical trials. Phase 1b clinical trials are typically aimed at confirming dosage, pharmacokinetics and safety in a larger number of patients. Some Phase 1b studies evaluate biomarkers or surrogate markers that may be associated with efficacy in patients with specific types of diseases or conditions.

Phase 2: This phase involves clinical trials in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases or conditions and to confirm dosage tolerance and appropriate dosage.

Phase 3: Phase 3 clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population, generally at geographically dispersed clinical study sites. These clinical trials, often referred to as “pivotal” clinical trials, are intended to establish the overall risk-benefit ratio of the compound and provide, if appropriate, an adequate basis for product labeling.

The FDA or the sponsor may suspend a clinical trial at any time on various grounds, including any finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB’s requirements or if the drug has been associated with unexpected, serious harm to study subjects. In addition, clinical trials may be overseen by an independent group of qualified experts organized by the sponsor, known as a data safety monitoring board or committee. Depending on its charter, this committee may determine whether a trial may move forward at designated check points based on access to certain data from the trial.

Post-approval trials may also be conducted after a drug receives initial marketing approval. These trials, often referred to as “Phase 4” trials, are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of such clinical trials as a condition of approval of a drug.

During the development of a new drug, sponsors are given several opportunities to meet with the FDA. These meetings can provide an opportunity for the sponsor to share information about the progress of the application or clinical trials, for the FDA to provide advice, and for the sponsor and the FDA to reach agreement on the next phase of development. These meetings may occur prior to the submission of an IND, at the end of Phase 2 clinical trials, or before a New Drug Application (“NDA”) is ultimately submitted. Sponsors typically use the meetings at the end of the Phase 2 trials to discuss Phase 2 clinical results and present plans for the pivotal Phase 3 clinical trials that they believe will support approval of the new drug. Meetings at other times may be made upon request.

Concurrent with clinical trials, companies typically complete additional animal and laboratory studies, develop additional information about the chemistry and physical characteristics of the drug, and finalize a process for manufacturing the product in commercial quantities in accordance with the FDA’s current Good Manufacturing Practices (“cGMP”) requirements. The manufacturing process must consistently produce quality batches of the drug, and, among other things, the manufacturer must develop methods for testing the identity, strength, quality and purity of the final drug. In addition, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate the effectiveness of the packaging and that the compound does not undergo unacceptable deterioration over its shelf life.

While the IND is active, progress reports summarizing the results of ongoing clinical trials and nonclinical studies performed since the last progress report must be submitted on at least an annual basis to the FDA, and written IND safety reports must be submitted to the FDA and investigators for serious and unexpected adverse events, findings from other studies suggesting a significant risk to humans exposed to the same or similar drugs, findings from animal or in vitro testing suggesting a significant risk to humans, and any clinically important, increased incidence of a serious adverse reaction compared to that listed in the protocol or investigator brochure.

There are also requirements governing the submission of certain clinical trials and completed trial results to public registries. Sponsors of certain clinical trials of FDA-regulated products are required to register and disclose specified clinical trial registration and results information, which is made publicly available at www.clinicaltrials.gov. Failure to properly report clinical trial results can result in civil monetary penalties. Disclosure of clinical trial results can often be delayed until the new product or new indication being studied has been approved.

U.S. review and approval process

The results of product development, preclinical and other non-clinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA. The submission of an NDA is subject to the payment of substantial user fees; a waiver of which may be obtained under certain limited circumstances.

The FDA reviews NDAs to determine, among other things, whether the product is safe and effective for its intended use and whether it is manufactured in a cGMP-compliant manner, which will assure and preserve the product's identity, strength, quality and purity. Under the Prescription Drug User Fee Act ("PDUFA"), as amended, the FDA has a goal of ten months from the date of "filing" of a standard, completed NDA for a new molecular entity to review and act on the submission. This review typically takes twelve months from the date the NDA is submitted to the FDA because FDA has approximately two months to make a "filing" decision after the application is submitted. The FDA conducts a preliminary review of all NDAs within the first sixty days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing.

The FDA may refer an application for a new drug to an advisory committee within the FDA. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether and under what conditions the application should be approved. The FDA is not bound by the recommendations of such an advisory committee, but it considers advisory committee recommendations carefully when making decisions.

Before approving an NDA, the FDA will also inspect the facility where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and are adequate to assure consistent production of the product within required specifications. Before approving an NDA, the FDA may also inspect one or more clinical trial sites to assure compliance with GCP requirements.

After the FDA evaluates an NDA, it will issue an approval letter or a Complete Response Letter. A Complete Response Letter indicates that the review cycle of the application is complete, and the application will not be approved in its present form. A Complete Response Letter usually describes the specific deficiencies in the NDA identified by the FDA and may require additional clinical data, such as an additional pivotal Phase 3 trial or other significant and time-consuming requirements related to clinical trials, nonclinical studies or manufacturing. If a Complete Response Letter is issued, the sponsor must resubmit the NDA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the NDA does not satisfy the criteria for approval. An approval letter authorizes commercial marketing of the drug with prescribing information for specific indications.

The Pediatric Research Equity Act ("PREA") requires IND sponsors to conduct pediatric clinical trials for most drugs, for a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration. Under PREA, original NDAs and supplements must contain a pediatric assessment unless the sponsor has received a deferral or waiver. The required assessment must evaluate the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The sponsor or the FDA may request a deferral of pediatric clinical trials for some or all of the pediatric subpopulations. A deferral may be granted for several reasons, including a finding that the drug is ready for approval for use in adults before pediatric clinical trials are complete or that additional safety or effectiveness data needs to be collected before the pediatric clinical trials begin. The FDA must send a non-compliance letter to any sponsor that fails to submit the required assessment, keep a deferral current or fails to submit a request for approval of a pediatric formulation.

If a drug receives the FDA approval, the approval may be limited to specific diseases and dosages, which could restrict the commercial value of the product. In addition, the FDA may require testing and surveillance programs to monitor the safety of approved products which have been commercialized and may require a sponsor to conduct post-marketing clinical trials, which are designed to further assess a drug's safety and effectiveness after NDA approval. The FDA may also place other conditions on approval, including a requirement for a risk evaluation and mitigation strategy ("REMS") to assure the safe use of the drug. If the FDA concludes a REMS is needed, the sponsor of the NDA must submit a proposed REMS. The FDA will not approve the NDA without an approved REMS, if required. A REMS could include medication guides, physician communication plans or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescribing or dispensing of products. Marketing approval may be withdrawn for non-compliance with REMS or other regulatory requirements, or if problems occur following initial marketing.

Post-approval requirements

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory standards is not maintained or if problems occur after the drug reaches the market. Later discovery of previously unknown problems with a drug may result in restrictions on the drug or even complete withdrawal of the drug from the market. After approval, some types of changes to the approved drug, such as adding new indications, certain manufacturing changes and additional labeling claims, are subject to further the FDA review and approval. Manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP regulations and other laws and regulations.

Any drug product manufactured or distributed by us pursuant to FDA approval will be subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the drug, providing the FDA with updated safety and efficacy information, drug sampling and distribution requirements, complying with certain electronic records and signature requirements, and complying with the FDA's promotion and advertising requirements. The FDA strictly regulates labeling, advertising, promotion and other types of information regarding approved drugs that are placed on the market, and imposes requirements and restrictions on drug manufacturers, such as those related to direct-to-consumer advertising, the prohibition on promoting products for uses or in patient populations that are not described in the product's approved labeling (known as "off-label use"), industry-sponsored scientific and educational activities, and promotional activities involving the internet. Discovery of previously unknown problems or the failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product for a certain indication or withdrawal of the product from the market as well as possible civil or criminal sanctions. Failure to comply with the applicable governmental requirements at any time during the product development process, approval process or after approval, may subject an applicant or manufacturer to administrative or judicial civil or criminal sanctions and adverse publicity. The FDA sanctions could include refusal to approve pending applications, withdrawal of an approval, clinical holds on post-marketing clinical trials, enforcement letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, mandated corrective advertising or communications with doctors, debarment, restitution, disgorgement of profits, or civil or criminal penalties.

Expedited development and review programs

The FDA administers a number of programs that can expedite the development and review of new drugs.

The fast track designation program is intended to expedite or facilitate the process for reviewing new drug products that meet certain criteria. Specifically, new drugs are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. With regard to a fast track product, the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

A product is eligible for priority review if it is intended to treat a serious condition, and if approved, would provide a significant improvement in safety or efficacy compared to currently marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug designated for priority review in an effort to facilitate the review. The FDA endeavors to review applications with priority review designations within six months of the filing date, as compared to ten months for review of NDAs under its current PDUFA review goals.

In addition, a product may be eligible for accelerated approval. Drugs intended to treat serious or life-threatening diseases or conditions may be eligible for accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict a clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. Drugs receiving accelerated approval may be subject to expedited withdrawal procedures if the sponsor fails to conduct the required post-marketing trials or if such trials fail to verify the predicted clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

Also, the Food and Drug Administration Safety and Innovation Act ("FDASIA") established a category of drugs referred to as "breakthrough therapies" that may be eligible to receive breakthrough therapy designation. A sponsor may seek FDA designation of a compound as a "breakthrough therapy" if the product is intended, alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance. The breakthrough therapy designation is a distinct status from both accelerated approval and priority review, which can also be granted to the same drug if relevant criteria are met. If a product is designated as breakthrough therapy, the FDA will work to expedite the development and review of such drug.

Fast track designation, priority review and breakthrough therapy designation do not change the standards for approval but may expedite the development or approval process. However, even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for the FDA review or approval will not be shortened.

Orphan drug designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States or, if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making a drug product available in the United States for this type of disease or condition will be recovered from sales of the product. Orphan designation must be requested before an NDA is submitted. After the FDA grants orphan designation, the identity of the therapeutic agent and its potential orphan use are publicly disclosed by the FDA. Orphan designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity or inability to manufacture the product in sufficient quantities. The designation of such drug also entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. However, competitors, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. Orphan exclusivity also could block the approval of one of our compounds for seven years if our compound is determined to be contained within the competitor's product for the same indication or disease, or if a competitor obtains approval of the same drug as defined by the FDA. In addition, if an orphan designated product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan exclusivity.

Marketing exclusivity

Market exclusivity provisions under the FDCA can delay the submission or approval of certain marketing applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to obtain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance.

During the exclusivity period, the FDA may not approve or even accept for review an abbreviated new drug application ("ANDA"), or an NDA submitted under Section 505(b)(2) (a "505(b)(2) NDA"), submitted by another company for another drug based on the same active moiety, regardless of whether the drug is intended for the same indication as the original innovative drug or for another indication, where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder.

The FDCA alternatively provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA, if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the modification for which the drug received approval on the basis of the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for drugs containing the active ingredient for the original indication or condition of use. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric exclusivity is another type of marketing exclusivity available in the United States. Pediatric exclusivity provides for an additional six months of marketing exclusivity attached to another period of exclusivity if a sponsor conducts clinical trials in children in response to a written request from the FDA. The issuance of a written request does not require the sponsor to undertake the described clinical trials. In addition, orphan drug exclusivity, as described above, may offer a seven-year period of marketing exclusivity, except in certain circumstances.

Foreign Approval and Sales

Sales outside the United States of potential drug compounds we develop will also be subject to foreign regulatory requirements governing human clinical trials and marketing for drugs. The requirements vary widely from country to country, but typically the registration and approval process takes several years and requires significant resources. In most cases, if the FDA has not approved a potential drug compound for sale in the United States, the potential drug compound may be exported for sale outside of the United States, only if it has been approved in any one of the following: the European Union, Canada, Australia, New Zealand, Japan, Israel, Switzerland and South Africa. There are specific FDA regulations that govern this process.

Health Insurance Portability and Accountability Act

The Health Insurance Portability and Accountability Act, as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH"), and implementing regulations thereunder (collectively, "HIPAA") requires certain healthcare providers, health plans and healthcare clearinghouses who conduct specified electronic healthcare transactions ("covered entities"), as well as their independent contractors and agents who conduct certain activities involving protected health information on their behalf ("business associates") to comply with enumerated requirements relating to the privacy, security and transmission of protected health information. Failure to comply with HIPAA can result in corrective action, as well as civil fines and penalties and government oversight. Among other changes, HITECH made HIPAA security standards directly applicable to business associates, increased the tiered civil and criminal fines and penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file actions to enforce HIPAA. Further, the breach notification rule implemented under HITECH requires covered entities to notify affected individuals, the U.S. Department of Health and Human Services Office of Civil Rights ("OCR"), the agency that enforces HIPAA, and for breaches affecting more than 500 individuals, the media, of any breaches of unsecured protected health information. HIPAA does not create a private right of action for individuals, though individuals may submit complaints related to HIPAA to OCR.

European General Data Protection Regulation

The collection and use of personal health data in the European Union had previously been governed by the provisions of the Data Protection Directive, which has been replaced by the General Data Protection Regulation ("GRPR") which became effective on May 25, 2018. While the Data Protection Directive did not apply to organizations based outside the EU, the GDPR has expanded its reach to include any business, regardless of its location, that provides goods or services to residents in the EU. This expansion would incorporate the Company's clinical trial activities in EU members states. The GDPR imposes strict requirements on controllers and processors of personal data, including special protections for "sensitive information" which includes health and genetic information of data subjects residing in the EU. GDPR grants individuals the opportunity to object to the processing of their personal information, allows them to request deletion of personal information in certain circumstances, and provides the individual with an express right to seek legal remedies in the event the individual believes his or her rights have been violated. Further, the GDPR imposes strict rules on the transfer of personal data out of the European Union to the United States or other regions that have not been deemed to offer "adequate" privacy protections. Failure to comply with the requirements of the GDPR and the related national data protection laws of the European Union Member States, which may deviate slightly from the GDPR, may result in fines of up to 4% of global revenue, or €20,000,000, whichever is greater. As a result of the implementation of the GDPR, the Company may be required to put in place additional mechanisms ensuring compliance with the new data protection rules.

The Company's research activities in the EU are currently limited to non-human preclinical studies, and as such, the Company does not collect, store, maintain, process, or transmit any Personal Data (as that term is defined under the GDPR) of trial subjects. The Company had several employees located in the EU prior to the sale of its remaining *vivo*Pharm business in March 2023 whosePersonal Data was subject to GDPR requirements. The Company has implemented a privacy and security program that is designed to adhere to the requirements of the GDPR in order to protect employee Personal Data, and in the event the Company progresses to research or clinical trials involving humans, to protect participant Personal Data. However, there is significant uncertainty related to the manner in which data protection authorities will seek to enforce compliance with GDPR. For example, it is not clear if the authorities will conduct random audits of companies doing business in the EU, or if the authorities will wait for complaints to be filed by individuals who claim their rights have been violated. Enforcement uncertainty and the costs associated with ensuring GDPR compliance be onerous and adversely affect the Company's business, financial condition, results of operations and prospects. As a result, the Company cannot predict the impact of the GDPR regulations on its current or future business, either in the US or the EU.

Other Regulatory Requirements

The Company's laboratory is subject to federal, state and local regulations relating to the handling and disposal of regulated medical waste, hazardous waste and biohazardous waste, including chemical, biological agents and compounds, blood and bone marrow samples and other human tissue. Typically, the Company uses outside vendors who are contractually obligated to comply with applicable laws and regulations to dispose of such waste. These vendors are licensed or otherwise qualified to handle and dispose of such waste.

OSHA has established extensive requirements relating to workplace safety for health care employers, including requirements to develop and implement programs to protect workers from exposure to blood-borne pathogens by preventing or minimizing any exposure through needle stick or similar penetrating injuries.

Discontinuing Operations

vivoPharm Business

The Company owned and operated the *vivo*Pharm Pty Ltd ("*vivo*Pharm") business which it acquired in 2017. In December 2021, the Company's Board of Directors approved the engagement of an investment banker to seek to sell the *vivo*Pharm business to allow the Company to focus on the development of neurological developmental and degenerative disease therapeutics. As of December 31, 2021, the Company commenced accounting for *vivo*Pharm as discontinuing operations. In the fourth quarter of 2022, the Company sold substantially all of the operations of *vivo*Pharm in two separate transactions. On March 13, 2023, the remaining *vivo*Pharm business was sold. For further information, see section entitled "Discontinuing Operations" later in this Part I, and Note 3, Discontinuing Operations, to the Company's Consolidated Financial Statements included in Part II. Item 8 herein.

On November 2, 2022, the Company entered into an Equity Purchase Agreement (the "Purchase Agreement") by and among the Company, Reaction Biology Corporation ("Reaction") and *vivo*Pharm, pursuant to which the Company sold the U.S. operations of its subsidiary, *vivo*Pharm to Reaction, in exchange for approximately $5.8 million in cash. Including final customary adjustments for working capital, closing cash, indebtedness and transaction expenses, the Company received net proceeds from the Reaction transaction of approximately $4.8 million. In addition, the Company incurred $0.4 million in exit costs associated with the Reaction transaction.

On December 30, 2022, *vivo*Pharm, entered into a Share Purchase Agreement (the "Share Agreement") with Sabine Brandt as trustee for the Brandt Family Trust ("Buyer"), pursuant to which *vivo*Pharm sold the entirety of the Company's remaining *vivo*Pharm operating business for early discovery services, represented by 100% of the outstanding shares of (i) of RDDT a *vivo*Pharm Company Pty Ltd; and (ii) *vivo*Pharm Europe Ltd, to Buyer in exchange for a nominal cash amount, subject to adjustments for closing cash and accounts payable, on and subject to the terms and conditions set forth therein (the "Second Transaction"). The Second Transaction resulted in the Company delivering target closing cash as part of the sold entities of approximately $827 thousand and the assumption by Buyer of liabilities of the sold entities aggregating to approximately $2.0 million. The Second Transaction was consummated effective December 31, 2022.

To complete the disposition of the Company's former *vivo*Pharm business and to resolve certain issues that had arisen with the Buyer, on March 13, 2023, the Company sold *vivo*Pharm to the Buyer for a nominal sum. As part of the sale of *vivo*Pharm to Buyer, the Company provided that *vivo*Pharm had cash of at least $200 thousand and the Company assumed certain specific *vivo*Pharm liabilities, principally liabilities directly associated with the proposed Phase 2 Donepezil clinical trial in Australia (which the Company has placed on hold as it evaluates its strategic alternatives) and certain *vivo*Pharm tax liabilities through the transaction's closing. The transaction was consummated effective March 13, 2023.

*vivo*Pharm had a large set of anti-tumor referenced data based on xenograft, syngeneic predictive orthotopic tumor models to provide discovery services such as contract research services, focused on predictive and unique specialized models to guide drug discovery with a major focus in immuno-oncology. *vivo*Pharm offered a suite of protocols and standard of care ("SoC") data and supports planning and conducting unique, specialized studies to guide drug discovery and development programs. These studies ranged from early compound selection to developing comprehensive sets of in vitro and in vivo data, as needed for IND applications as required by regulatory bodies, such as the FDA, the European Medicines Agency ("MEA") and Therapeutic Goods Administration ("TGA") in Australia. *vivo*Pharm's discovery services include preclinical anti-tumor efficacy, good laboratory practice ("GLP") compliant toxicity studies and small and bio-molecule analytical services. *vivo*Pharm provided the tools and testing methods for companies and researchers seeking to identify and to develop new compounds and molecular-based biomarkers for diagnostics and therapeutics.

*vivo*Pharm's international presence enabled it to access global market opportunities. *vivo*Pharm's headquarters in Australia specialized in safety and toxicology studies, including mammalian, genetic and in vitro, along with bioanalytical services including immune-analytical capabilities. *vivo*Pharm operated from multiple locations in Melbourne (VIC) and Adelaide (SA). *vivo*Pharm's U.S.-based laboratory, located at the Hershey Center for Applied Research in Hershey, Pennsylvania, primarily focused on screening and efficacy testing for a wide range of pharmaceutical and chemical products. The third location, in Munich, Germany, hosted project management and business development personnel for the European customers.

***vivo*Pharm's Service Offerings**

*vivo*Pharm focuses on the preclinical market. Its services are primarily sought by biotechnology and pharmaceutical companies engaged in designing and preparing to run clinical trials, for their value and efficacy in oncology and immuno-oncology treatments and therapeutics. *vivo*Pharm believes trial participants' likelihood of experiencing either favorable or adverse responses to the trial treatment can be determined first by its extended portfolio of orthotopic, xenografts and syngeneic tumor test systems, and in early development through biomarker identification and development, thereby increasing trial efficiency, participant safety and trial success rates. Biotechnology and pharmaceutical companies also seek *vivo*Pharm's services in preclinical trial design and drug development, in order to effectively and efficiently select those therapeutic candidates most likely to progress to clinical treatment options. *vivo*Pharm's services are also sought by researchers and research groups seeking to identify biomarkers and panels and develop methods for diagnostic technologies and tests for disease.

vivo*Pharm *Discovery Services

*vivo*Pharm offers proprietary preclinical test systems valued by the pharmaceutical industry, biotechnology companies and academic research centers. In particular, *vivo*Pharm's preclinical development of biomarker detection methods, response to immuno-oncology directed novel treatments and early prediction of clinical outcome is supported by its extended portfolio of orthotopic, xenografts and syngeneic tumor test systems. *vivo*Pharm specializes in conducting studies tailored to guide drug development, starting from compound libraries and ending with a comprehensive set of in vitro and in vivo data and reports, as needed for Investigational New Drug filing. *vivo*Pharm operates in AAALAC accredited and GLP-compliant audited facilities. *vivo*Pharm provides its preclinical services, with a focus on efficacy models, from its Hershey, PA facility for the U.S. and European markets, and supplemented with GLP toxicology and extended bioanalytical services in its Australia-based facility in Melbourne, Victoria, and Adelaide, South Australia.

*vivo*Pharm's Discovery Services provide the tools and testing methods for companies and researchers seeking to identify new molecular- and biomarker-based indicators for disease and to determine the pharmacogenomics, safety and effectiveness of potential therapeutic candidate compounds. Discovery Services offered include development of both xenograft and syngeneic animal models, toxicology and genetic toxicology services, pharmacology testing, pathology services, and validation of biomarkers for diseases including cancers. *vivo*Pharm also provides consulting, guidance and preparation of samples and clinical trial design. *vivo*Pharm believes the ability to analyze variations in biomarkers, tumor cells and compounds, and to interpret results into meaningful predictors of disease or indicators of therapeutic success is essential to discovering new molecular markers for cancer, new therapeutics, and targets for therapies.

*vivo*Pharm executes its market strategy by delivering results-oriented information and insights which we believe is or will become important to drug discovery and development and ultimately to accelerated therapy approvals and commercialization.

*vivo*Pharm's Discovery Services aim to accelerate the development of novel treatment candidates and precision medicine, with a current focus in oncology. *vivo*Pharm believes the level of personalized treatment required to optimize a patient's treatment regimen and to maximize clinical trial success rates may be significantly improved using molecular- and biomarker-based characterization.

Sales and Marketing

*vivo*Pharm's sales and marketing efforts consist of both direct and indirect efforts, with the majority of efforts focused on direct sales in the United States, Europe and Australia. *vivo*Pharm collaborates with preclinical development and translational science teams at pharmaceutical and biotech companies on studies involving tumor models and therapeutic candidate compound testing.

Other Discontinuing Operations

Prior to the Merger with StemoniX, in July 2019, CGI sold all assets related to its biopharma and clinical businesses. As of December 31, 2022 and 2021, $267 thousand and $409 thousand of liabilities, respectively, relating to these businesses are classified as other current liabilities - discontinuing operations on the Company's consolidated balance sheets.

Employees and Human Capital Management

As of March 15, 2023, we had 8 full-time employees, including 1 with a PhD degree in our continuing Vyant Bio and StemoniX operations. Of these employees, 4 support our research and development and historical manufacturing capabilities and 4 are general and administrative. We have never had a work stoppage, and none of our employees are represented by a labor organization or under any collective-bargaining arrangements. We consider our employee relations to be good.

Our human capital management objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans, along with a comprehensive benefits package and a 401(k) plan, are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards.

The Company's employees are in high demand in the industries in which we operate. We have experienced employee turnover in 2022 of 52.4% employees. The demand for our employees remains subject to the overall employment market conditions, including increased salaries and a high number of job openings experienced by many companies that are highly dependent on human capital talent. From January 1, 2023 through March 15, 2023, a total of 18 jobs were eliminated by the Company as part of the Cash Preservation Plan.

Segment and Geographical Information

The Company operates in one reportable business segment and derives revenue from one country as of December 31, 2022, with 53% and 61% of its continuing operations revenue coming from the United States in fiscal year 2022 and 2021, respectively.

Corporate and Available Information

The Company was incorporated in the State of Delaware on April 8, 1999. On March 30, 2021, the Company completed its Merger with StemoniX, which is now a wholly-owned subsidiary of the Company.

The Company's principal executive offices are located at 2370 State Route 70 West, Two Executive Campus, Suite 310, Cherry Hill, NJ 08002-4102. The Company's telephone number is (201) 479-1357 and the corporate website address is www.vyantbio.com. On the Company's website, investors can obtain, free of charge, a copy of its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Code of Conduct and Business Ethics, including disclosure related to any amendments or waivers thereto, other reports and any amendments thereto filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act of 1934, as amended, as soon as reasonably practicable after the Company files such material electronically with, or furnishes it to, the U.S. Securities and Exchange Commission (the "SEC"). None of the information posted on the Company's website is incorporated by reference into this Annual Report. The SEC also maintains a website at http://www.sec.gov that contains reports, proxy and information statements and other information regarding the Company and other companies that file materials with the SEC electronically.

Item 1A. Risk Factors

An investment in our common stock involves a high degree of risk including the risk of a loss of your entire investment. You should carefully consider the risks and uncertainties described below and the other information contained in this report and the other reports we filed with the Securities and Exchange Commission. The risks set forth below are not the only ones facing us. Additional risks and uncertainties may exist that could also adversely affect our business, operations and financial condition. If any of the following risks actually materialize, our business, financial condition and/or operations could suffer. In such event, the value of our common stock could decline, and you could lose all or a substantial portion of the money that you have paid for our common stock.

Summary of Risk Factors

- We may not be successful in our efforts to identify and/or consummate any strategic transaction, and any such transactions we consummate may not produce the desired results.
- Recurring losses and negative cash flows from operations raise substantial doubt regarding our ability to continue as a going concern.
- We have a history of net losses, expect to incur net losses in the future and may never achieve sustained profitability.
- If a strategic transaction is not consummated, our Board may decide to pursue a dissolution and liquidation of our remaining assets. In such an event, the amount of cash available for distribution to our stockholders, if any, will depend heavily on the timing of such liquidation as well as the amount of cash that will need to be reserved for current debts and commitments and contingent liabilities.
- Any strategic business combination or other transactions that we may consummate in the future could have a variety of negative consequences and we may implement a course of action or consummate a transaction that yields unexpected results that adversely affect our business and decrease the value of the Company.
- There can be no assurance that we will be able to comply with the continued listing standards of Nasdaq.
- Clinical trials are expensive, time-consuming and difficult to design and implement, and have traditionally had high attrition.
- Our future revenue is unpredictable and operating results are expected to fluctuate from period to period.
- If we are unable to obtain and maintain patent and other intellectual property protection for our products and processes, or if the scope of the patent and other intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our technology and products may be adversely affected.
- The loss or transition of any member of our management team could adversely affect our business.
- Because we do not expect to pay cash dividends for the foreseeable future, you must rely on appreciation of our common stock price for any return on your investment. Even we change that policy, we may be restricted from paying dividends on our common stock.
- Our business is subject to risks arising from epidemic diseases, such as the global outbreak of COVID-19.

Risks Related to our Strategic Alternative Process

We may not be successful in identifying and implementing any strategic business combination or other transaction.

We have engaged LifeSci Capital to assist us in seeking a strategic transaction to benefit our shareholders. We continue to evaluate various potential strategic options for the Company, including a merger, reverse merger, sale, wind-down, liquidation and dissolution or other strategic transaction. However, we have not been able to identify a counterparty willing to move forward with us in the past three months and there can be no assurance that we will be able to identify such counterparty or, if we do, successfully consummate any particular strategic transaction. The biotech industry is a competitive industry and thus there are numerous competitors of the Company for strategic transactions with a limited number of parties seeking a transaction on terms that would be beneficial to our shareholders. The process of evaluating these strategic options may be very costly, time-consuming and complex and we have incurred, and may in the future incur, significant costs related to this continued evaluation, such as legal and accounting fees and expenses and other related charges. We may also incur additional unanticipated expenses in connection with this process. A considerable portion of these costs will be incurred regardless of whether any such course of action is implemented or transaction is completed. Any such expenses will decrease the remaining cash available for use in our business and may diminish or delay any future distributions to our stockholders. Any delays in identifying a potential counterparty will cause our cash balance to continue to deplete, which could make us less attractive as a strategic counterparty. The continued review of our strategic options may also create continued uncertainty for our employees and this uncertainty may adversely affect our ability to retain key employees necessary to maintain our ongoing operations or to execute any potential strategic options, which could have a material adverse effect on our business. Further, the market capitalization of our Company is below the value of our cash and cash equivalents. Potential counterparties in a strategic transaction involving our company may place minimal or no value on our remaining assets. As a result, we may not be able to execute on a strategic transaction before our cash position gets reduced, as a result of running a public company, to the point that we will need to pursue the winding down and dissolution of the Company.

Any strategic transactions that we may consummate in the future could have negative consequences.

Any strategic business combination or other transactions that we may consummate in the future could have a variety of negative consequences and we may implement a course of action or consummate a transaction that yields unexpected results that adversely affect our business and decrease the value of the Company. There can be no assurances that any particular course of action, business arrangement or transaction, or series of transactions, will be pursued, be successfully consummated, lead to increased stockholder value, or achieve the results hoped for. Any failure of such potential transaction to achieve the anticipated results could significantly impair the ability of a shareholder to realize any benefit from any future strategic transaction.

If we are successful in completing any strategic transaction, we may be exposed to other operational and financial risks.

The negotiation and consummation of any strategic transaction may require more time or greater cash resources than we anticipate and expose us to other operational and financial risks, including:

- increased near-term and long-term expenditures;
- exposure to unknown liabilities;
- higher than expected acquisition or integration costs;
- incurrence of substantial debt or dilutive issuances of equity securities to fund future operations;
- write-downs of assets or goodwill or incurrence of non-recurring, impairment or other charges;
- increased amortization expenses;
- difficulty and cost in combining the operations and personnel of any acquired business with our operations and personnel;
- impairment of relationships with key suppliers or customers of any acquired business due to changes in management and ownership;
- inability to retain key employees of our Company or any acquired business; and
- possibility of future litigation.

Any of the foregoing risks could have a material adverse effect on our business, financial condition and prospects.

If a strategic transaction is not consummated, our Board may decide to pursue a dissolution and liquidation of our remaining assets. In such an event, the amount of cash available for distribution to our stockholders, if any, will depend heavily on the timing of such liquidation as well as the amount of cash that will need to be reserved for current debts and commitments and contingent liabilities.

There can be no assurance that a strategic transaction will be completed. If a strategic transaction is not completed, our Board may decide to pursue a dissolution of the Company and liquidation of all of our remaining assets. In such an event, the amount of cash available for distribution to our stockholders, if any, will depend heavily on the timing of such decision, as with the passage of time the amount of cash available for distribution will be reduced as we continue to fund our operations. The process of liquidation may be lengthy and we cannot make any assurances regarding the timing of completing such a process. If our Board were to approve and recommend, and our stockholders were to approve, a dissolution and liquidation, we would be required under Delaware corporate law to pay our outstanding obligations, as well as to make reasonable provision for contingent and unknown obligations, prior to making any distributions in liquidation to our stockholders. There can be no assurance as to the amount of available cash that will be available to distribute to stockholders after paying our debts and other obligations and setting aside funds for reserves, nor as to the timing of any such distribution. Our financial commitments and contingent liabilities would include: (i) personnel costs, including severance; (ii) contractual obligations to vendors and clinical study sites; (iii) non-cancelable lease obligations; and (iv) potential litigation against us. Non-cancelable lease obligations include our Maple Grove, MN and Cherry Hill, NJ leases. No assurances can be given as to the terms for cancellation that we will be able to negotiate with our landlords. We also have contingent liabilities related to our former *vivo*Pharm subsidiary described below.

As a result of the requirement to reserve for contingencies, a portion of our assets may need to be reserved pending the resolution of such obligations and the timing of any such resolution is uncertain. In addition, we may be subject to litigation or other claims related to a dissolution and liquidation. If a dissolution and liquidation were pursued, our Board, in consultation with our advisors, would need to evaluate these matters and make a determination about a reasonable amount to reserve. Accordingly, holders of our common stock could lose all or a significant portion of their investment in the event of a liquidation, dissolution or winding up.

We may become involved in securities class action litigation that could divert management's attention and harm the Company's business, and insurance coverage may not be sufficient to cover all costs and damages.

In the past, securities class action litigation has often followed certain significant business transactions, such as the sale of a company or announcement of any other strategic transaction, or the announcement of negative events, such as discontinuations of clinical programs. We suffered such costs in connection with the Cancer Genetics-StemoniX merger consummated in March 2021. These events may also result in investigations by the SEC. We may be exposed to such litigation or investigation even if no wrongdoing occurred. Litigation and investigations are usually expensive and divert management's attention and resources, which could adversely affect our business and cash resources and our ability to consummate a potential strategic transaction or the ultimate value our stockholders receive in any such transaction.

We may have certain liability with respect to claims related to the vivoPharm business that we sold in two transactions during the fourth quarter of 2022.

As a result of the sale of the U.S. operations of the Company's *vivo*Pharm business to Reaction in November 2022 and the sale of the remaining parts of the business in December 2022 and March 2023, we may be subject to adjustments and/or claims for money owed to the buyers with respect to the *vivo*Pharm business.

Regarding the sale of the non-U.S. portion of the business ("Australian Business"), a customer and creditor of the Australian Business has asserted that moneys are due it. As part of the disposition of the balance of the Company's former *vivo*Pharm business on March 13, 2023, the Buyer agreed to be responsible for this for this claim.

Risks Relating to our Financial Condition and Capital Requirements

We have a history of net losses, expect to incur net losses in the future and may never achieve sustained profitability.

We have historically incurred substantial net losses. We had net losses of $22.7 million and $40.9 million for the years ended December 31, 2022 and 2021, respectively, and had an accumulated deficit of $101.5 million as of December 31, 2022. The 2022 and 2021 results including a net loss from discontinuing operations of $6.9 million and $22.3 million, respectively, which include $5.4 million and $20.2 million of net goodwill and intangible asset impairment charges, as well as continuing operations non-cash expenses of $2.1 million and $4.8 million, respectively, and merger related costs of $2.3 million in 2021. We expect losses to continue. These losses have had, and will continue to have, an adverse effect on working capital, total assets and stockholders' equity. Because of the numerous risks and uncertainties associated with our drug discovery efforts, and the uncertainty of generating revenue associated with these efforts, and costs associated with being a public company, 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 profitability on a quarterly or annual basis. Our inability to achieve, and then maintain, profitability would negatively affect our business, financial condition, results of operations and cash flows.

Recurring losses and negative cash flows from operations raise substantial doubt regarding our ability to continue as a going concern.

The Company has suffered recurring losses and negative cash flows from operations since inception, has an accumulated deficit, has substantially ceased revenue generation, and is projecting insufficient liquidity to meet our obligations as they become due over the next twelve months. As of December 31, 2022, the Company had cash and cash equivalents of $10.0 million, an accumulated deficit of $101.5 million, operating cash outflows from continuing operations of $12.8 million and a net loss from continuing operations of $15.8 million for the year then ended. These conditions and events raise substantial doubt about the Company's ability to continue as a going concern.

Therefore, in connection with the preparation of this Annual Report for the year ended December 31, 2022, our management has concluded that these conditions and events raise substantial doubt about the Company's ability to continue as a going concern for the twelve months following the issuance of this Annual Report. In response to these conditions and based on our current cash preservation plan, the Company has been attempting to reduce expenses and slow cash flows. Meanwhile, we have been seeking and evaluating strategic partners to acquire our assets, including our public company as a reverse merger candidate. We currently do not plan to raise additional capital to fund our operations through public or private equity offerings or debt financings, and we have terminated our at-the-market equity offering program. There are no assurances that we will be able to sell any of our assets to raise cash or find a partner in any strategic transactions or find a reverse merger candidate and we may therefore need to complete an orderly winddown of the Company's operations or, if sufficient funds are not available, bankruptcy.

The Company's ability to satisfy claims of all its creditors in full is uncertain.

The Company remains liable to various unsecured creditors, including amounts due to its landlords in Maple Grove, Minnesota and Cherry Hill, New Jersey. As of December 31, 2022, the Company had an aggregate of $3.7 million of current liabilities and $5.3 million in total liabilities. On March 9, 2023, the Company terminated its San Diego lease agreement with an early termination fee of $45 thousand. The San Diego facility represented $201 thousand of current liabilities and $1.1 million of total liabilities as of December 31, 2022. This is compared to current assets of $11.5 million, as of December 31, 2022. Additional losses have been incurred since December 31, 2022 and expenses will be incurred in connection with any strategic transaction of wind down process. No assurances can be given that the Company will be able to pay its unsecured creditors in full or that claims will not be asserted in addition to the amounts which the Company believes it is liable for at this time.

Our future revenue is unpredictable and operating results are expected to fluctuate from period to period.

The emerging nature of the markets in which we compete make it difficult for us to accurately forecast our revenue in any given period.

Historically, most of our revenue was derived from the *vivo*Pharm business, which we sold before the end of 2022. Revenue from StemoniX have historically derived from the sale of iPSC-based microOrgan plates to pharmaceutical, biotechnology and research customers or the performance of DaaS for these customers. Our revenue previously generated from these activities substantially ceased in 2022 as we focused on our therapeutic drug discovery and development using our iPSC human disease models. Therefore, we will not generate revenue until we are able to successfully develop and discover drug candidates and partner with pharmaceutical and biotechnology companies and other industry partners.

To date, we have not generated revenue from licensing our iPSC disease models or therapeutic assets. Additionally, our ability to obtain license and/or subscription agreements with pharmaceutical companies and other industry partners is unproven, and in the best of circumstances it may take several months or more in order to enter into such agreements. There can be no assurances that we will be successful in entering into collaborations with pharmaceutical companies, artificial intelligence/technology and other industry partners. Moreover, even after entering into such agreements, it may take months or years before they generate revenue, if at all. There is no assurance that any revenue generated will recover the costs.

For these reasons, it is difficult for us to predict, when, if ever, we will generate revenue and become profitable.

Our operating results are likely to fluctuate substantially from period to period as a result of several factors, many of which are beyond our control. These factors include:

- the ability to derive licensing contracts for Company-identified drug candidates or Company developed human iPSC disease models;
- the ability to enter into successful strategic relationships;
- the unpredictable expenses associated with drug development and clinical trials;
- the amount and timing of operating costs and capital expenditures relating to expansion of our operations;
- the announcement or introduction of new or enhanced technologies, products, or services by competitors; and
- the ability to attract and retain qualified personnel.

Prior to the Merger, CGI identified a material weakness in its internal control over financial reporting. We had not fully remediated this material weakness as of December 31, 2021. If we are not able to maintain an effective system of internal control over financial reporting, the reliability of our financial reporting, investor confidence in us and the value of our common stock could be adversely affected.

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in such internal controls. Section 404 of the Sarbanes-Oxley Act ("Section 404") requires that we evaluate and determine the effectiveness of internal controls over financial reporting and provide a management report on internal control over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected and corrected on a timely basis.

During the audit for the 2020 fiscal year of CGI, the accounting predecessor (as the Merger was a reverse merger) and legal acquiror of StemoniX, identified a material weakness in internal control over financial reporting related to our accounting for the potential impairment of intangible assets. This material weakness was not remediated at the time of the Merger and therefore, became part of the post-Merger internal control structure of Vyant Bio. This accounting requires us to record an impairment charge if the carrying amount of the asset group is not recoverable and is in excess of the fair value of the asset group. CGI's calculation of undiscounted future cash flows resulted in a conclusion that no impairment was necessary, however, we could not supply supporting evidence that its calculation was accurate.

We began the process of implementing changes to its internal control over intangible assets to remediate the control deficiencies that gave rise to the material weakness, and implemented the following enhancements to internal controls to address this material weakness:

- Hired a new CFO with significant experience in internal controls, US GAAP and financial forecasting;
- Established a financial planning and analysis function in June 2021 to analyze, forecast and report on the Company's operations; and
- Developed a financial model to forecast *vivo*Pharm revenue based on inputs from management.

We determined that the underlying revenue forecasting model to support the determination of cash flows for the *vivo*Pharm business contained data input errors that required additional analysis and validation during the first quarter of 2022. While these data errors did not impact our assessment of the carrying value of the *vivo*Pharm business as of December 31, 2021, the redesign of this control and ongoing testing of its operational effectiveness did not occur until 2022. As a result, the Company concluded that the deficiency in our internal control over financial reporting related to revenue and cash flow forecasting would give rise to the level of a material weakness as of December 31, 2021. As the underlying *vivo*Pharm businesses were sold in 2022, the control related to forecasting the *vivo*Pharm revenue and operating results is no longer required as of December 31, 2022. The Company remediated this control in 2022 through enhanced data validation and management review.

Our ability to establish and maintain an effective system of internal control over financial reporting could impact the reliability of our financial reporting, investor confidence in us and the value of our common stock could be materially and adversely affected. Effective internal control over financial reporting is necessary for us to provide reliable and timely financial reports and, together with adequate disclosure controls and procedures, are designed to reasonably detect and prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet its reporting obligations. For as long as we are a "smaller reporting company" under the U.S. securities laws, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting pursuant to Section 404. An independent assessment of the effectiveness of internal control over financial reporting could detect problems that management's assessment might not. Undetected material weaknesses in our internal control over financial reporting could lead to financial statement restatements and require us to incur the expense of remediation.

We do not expect that disclosure controls or internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Failure of its control systems to prevent error or fraud could materially adversely impact us.

Risks Relating to Our Business and Strategy

We may not be able to sell our business and/or any sales we consummate may not produce the desired results.

On January 4, 2023, we announced our commitment to a plan to seek strategic alternatives for our business, including the sale of all or parts of our Company, as we believe it is in the best interest of our stockholders. To date, no alternatives have been found. Meanwhile, our preclinical and clinical programs have been delayed.

We can provide no assurances that we will be successful in seeking strategic alternatives for our business, that we will do so in accordance with our expected timeline or that we will recover the carrying value of the assets. Additionally, any decisions made regarding our deployment or use of any sales proceeds we receive in any sale involves risks and uncertainties. As a result, our decisions with respect to such proceeds may not lead to increased long-term stockholder value, or may result in a material charge to our statement of operations.

A number of factors will impact the value of our business which are outside our control, therefore, there can be no assurance that our business can be sold for a price that in our opinion reflects its fair value. If a sale of our business at what we consider to be a reasonable price is not available, we may decide to cease efforts to sell our business and wind down our business.

We face competition in drug discovery from other biotechnology, pharmaceutical, artificial intelligence and other drug discovery companies and technologies and our operating results may be negatively affected if we fail to compete effectively.

The biotechnology, pharmaceutical and drug discovery and development industries are intensely competitive and subject to rapid and significant technological change. We have competitors in a number of jurisdictions, many of which have substantially greater name recognition, commercial infrastructures and financial, technical and personnel resources than we have. Established competitors may invest heavily to quickly discover and develop novel compounds that could make our drug candidates obsolete or uneconomical. Any new product that competes with an approved product may need to demonstrate compelling advantages in efficacy, cost, convenience, tolerability and safety to be commercially successful. In recent years drug discovery has integrated biology, chemistry and technology, including machine learning, augmented and artificial intelligence as well as several forms of human cells to accelerate research and development activities and its effectiveness and efficiency. Other competitive factors, including generic competition, could force us to lower prices or could result in reduced sales. In addition, new products developed by others could emerge as competitors to our drug candidates. If we are not able to compete effectively against our current and future competitors, our business will not grow and our financial condition and operations will suffer.

We have limited experience in drug discovery, drug development, disease model development and clinical development, and we have never advanced a drug to human development or had a drug approved alone or with collaborators.

The convergence in drug discovery of human organoid disease models along with new *in silico* technologies including artificial intelligence, machine learning, and new chemistry creation is unproven. There is limited evidence that such an approach will reduce time and risk around preclinical development. Regarding our business model to date, we are pursuing two distinct but parallel tracks to identify novel and repurposed drug therapies: we develop and license access to human cell-derived disease models, and in conjunction with applying data science and in vivo testing, use this technology to identify candidates to bring through the discovery phase which we plan to then partner with pharmaceutical companies to pursue clinical development and commercialization. We may also out license our iPSC disease model development capabilities to strategic partners to co-develop drugs associated with such disease models. To date, we have made very limited independent drug discovery efforts, have not licensed our iPSC disease models and no assurances can be given that we will be successful in generating revenue from these activities.

The Company's strategy has been to attempt to file approximately two IND applications with FDA starting in 2023 and perform clinical trials up through Phase I. In connection with our strategic alternatives review and Cash Preservation Plan initiated in January 2023, we ceased all clinical and preclinical development activities in January 2023. We do not have any experience in clinical development and have not advanced any drug candidates into clinical development. Our lack of experience in conducting clinical development activities may adversely impact the likelihood that we will be successful in advancing our programs, if we are not able to find experienced partners. Further, any predictions you make about the future success or viability of our internal drug discovery programs may not be as accurate as they could be if we had a history of conducting clinical trials and developing our own drug candidates.

In addition, as our internal drug discovery business grows, we may encounter unforeseen expenses, difficulties, complications, delays, and other known and unknown factors.

Our approach to the discovery and development of drug candidates based on our microOrgan plates and our AnalytiX tools is novel and unproven, and we do not know whether we will be able to develop any products of commercial value.

We are leveraging our microOrgan plates and our AnalytiX tools to attempt to create a pipeline of drug candidates for patients whose diseases have not been adequately addressed to date by other approaches, and to identify drug candidates with a higher likelihood of success in clinical trials. While we believe that our technology may potentially enable drug research and clinical development that is more efficient than conventional drug research and development, our approach is both novel and unproven. Because our approach is both novel and unproven, the cost and time needed to discover our drug candidates is difficult to predict, and our efforts may not result in the discovery and development of commercially viable medicines or therapies. We may also be incorrect about the effects of any drug candidates we pursue on disease states, which may limit the utility of our approach or the perception of the utility of our approach. Furthermore, our estimates of our defined patient populations available for study and treatment may be lower than expected, which could adversely affect our or our partners' ability to conduct clinical trials and may also adversely affect the size of any market for medicines we may license for commercialization. Our approach may not result in time savings, higher success rates or reduced costs as we expect it to, and if not, we may not attract collaborators or develop new drugs as quickly or cost effectively as expected and therefore we may not be able to commercialize our approach as expected at this time.

We may never realize return on our investment of resources and cash in our drug discovery collaborations.

We intend to use our high-throughput drug screening on our microOrgan plate technology and use our data science-based AnalytiX tools to quickly test and evaluate a drug for toxicity and efficacy. We believe such technologies, which we have developed at significant expense, will provide us or our collaborators with valuable drug discovery insights. Our collaborators could include start-up, pre-commercial biotechnology, *in silico* and large-scale pharmaceutical companies. When we engage in drug discovery with these collaborators, we will strive to receive a mixture of upfront payments, including licensing fees, milestone-based fees, and ongoing royalty payments in addition to any charges for *in vivo, in vitro* and *in silico* testing, and our SaaS services. However, we have not yet been successful in generating any significant payments or contracts using this business model and may never be.

We may never enter into any material drug discovery collaborations nor realize return on our investment of resources and cash in our drug discovery collaborations. Drug discovery is complex, capital intensive and is prone to high failure rates and uncertain outcomes. Our drug discovery collaborators may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of any drug candidates. In addition, our ability to realize return from our drug discovery collaborations is subject to the following risks, among others:

- drug discovery collaborators have significant discretion in determining the amount and timing of efforts and resources that they will apply to our collaborations and may not perform their obligations as expected;
- drug discovery collaborators may not pursue development or commercialization of any drug candidates for which we are entitled to option fees, milestone payments, or royalties or may elect not to continue or renew development or commercialization programs based on results of clinical trials or other studies, changes in the collaborator's strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- drug discovery collaborators may delay clinical trials for which we are entitled to milestone payments;
- we may not have access to, or may be restricted from disclosing, certain information regarding our collaborators' drug candidates being developed or commercialized and, consequently, may have limited ability to inform our stockholders about the status of, and likelihood of achieving, milestone payments or royalties under such collaborations;
- drug discovery collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with any drug candidates and products for which we are entitled to milestone payments or royalties if the collaborator believes that the competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive;
- drug candidates discovered in drug discovery collaborations with us may be viewed by our collaborators as competitive with their own drug candidates or products, which may cause our collaborators to cease to devote resources to the commercialization of any such drug candidates;
- drug discovery collaborators may begin to perceive us to be a competitor more generally, particularly if we advance our internal drug discovery programs, and therefore may be unwilling to continue then existing collaborations with us or to enter into new collaborations with us;
- a drug discovery collaborator may fail to comply with applicable regulatory requirements regarding the development, manufacture, distribution, or marketing of a drug candidate or product, which may impact our ability to receive milestone payments;
- disagreements with drug discovery collaborators, including disagreements over intellectual property or proprietary rights, contract interpretation, or the preferred course of development, might cause delays or terminations of the research, development, or commercialization of drug candidates for which we are eligible to receive milestone payments, or might result in litigation or arbitration;
- drug discovery collaborators may not properly obtain, maintain, enforce, defend or protect our intellectual property or proprietary rights or may use our proprietary information in such a way as to potentially lead to disputes or legal proceedings that could jeopardize or invalidate our or their intellectual property or proprietary information or expose us and them to potential litigation;
- drug discovery collaborators may infringe, misappropriate, or otherwise violate the intellectual property or proprietary rights of third parties, which may expose us to litigation and potential liability;
- drug discovery collaborators could suffer from operational delays as a result of global health impacts, such as the COVID-19 pandemic; and
- drug discovery collaborations may be terminated prior to our receipt of any significant value from the collaboration.

Any drug discovery collaborations we enter into may not lead to development or commercialization of drug candidates that results in our receipt of fees, milestone payments, or royalties in a timely manner, or at all. If any drug discovery collaborations that we enter into do not result in the successful development and commercialization of drug products that result in fees, milestone payments, or royalties to us, we may not receive return on the resources we have invested in the drug discovery collaboration. Moreover, even if a drug discovery collaboration initially leads to the achievement of milestones that result in payments to us, it may not continue to do so.

We also will likely rely on collaborators for the development and potential commercialization of drug candidates we discover internally when we believe it will help maximize the commercial value of the drug candidate. Such collaborators may not achieve the research, development, regulatory and sales milestones for those development candidates that result in material payments to us.

We may not be successful in our efforts to identify or discover drug candidates and may fail to capitalize on programs, collaborations, or drug candidates that may present a greater commercial opportunity or for which there is a greater likelihood of success.

Research programs to identify new drug candidates require substantial technical, financial human resources, and external expertise. As a newly formed organization of existing technologies, we have not yet developed any drug candidates, and we may fail to identify potential drug candidates for clinical development. Similarly, a key element of our business plan is to expand the use of our technology in drug discovery collaborations with third parties. A failure to demonstrate the utility of our platform by successfully using it ourselves to discover internal drug candidates could harm our business prospects.

Because we have limited resources, we focus our research programs on diseases where we have some know-how and where we believe there is a meaningful commercial opportunity, among other factors. The focus of our initial internal drug discovery programs is in the area of neurological disorders including Rett Syndrome, CDLK5 Deficiency Disorder, and Parkinson's Disease. We may forego or delay pursuit of opportunities with certain programs, collaborations, or drug candidates or for indications that later prove to have greater commercial potential. However, the development of any drug candidate we pursue may ultimately prove to be unsuccessful or less successful than another potential drug candidate that we might have chosen to pursue on a more aggressive basis with our capital resources. If we do not accurately evaluate the commercial potential for a particular drug candidate, we may relinquish valuable rights to that drug candidate through strategic collaboration, partnership, licensing, or other arrangements in cases in which it would have been more advantageous for us to retain development and commercialization rights to such drug candidate. Alternatively, we may allocate internal resources to a drug candidate in a therapeutic area in which it would have been more advantageous to enter into a collaboration.

If we are not able to establish or maintain collaborations to develop and commercialize any of the disease models we develop or drug candidates we discover, we may have to alter our development and commercialization plans for those disease models and drug candidates and our business could be adversely affected.

We have not yet established license collaborations for our disease models and related AnalytiX tools. We expect to rely on future collaborators for either the development of our disease models or leverage such licensed models for drug discovery. We face significant competition in seeking appropriate collaborators for these activities, and a number of more established companies may also be pursuing such collaborations.

We have also not yet identified any drug candidates or advanced any of our drug discovery programs past the discovery stage and into preclinical studies or human clinical trials. We expect to rely on future collaborators for the development and potential commercialization of drug candidates we discover internally when we believe it will help maximize the commercial value of the drug candidate. We face significant competition in seeking appropriate collaborators for these activities, and a number of more established companies may also be pursuing such collaborations. These established companies may have a competitive advantage over us due to their size, financial resources, and greater clinical development and commercialization expertise. Whether we reach a definitive agreement for such collaborations will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration, and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of preclinical studies and clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject drug candidate, the costs and complexities of manufacturing and delivering such drug candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge, and industry and market conditions generally. The collaborator may also consider alternative drug candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our drug candidate. Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large biopharmaceutical companies that have resulted in a reduced number of potential future collaborators.

If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms or at all, we may have to curtail the development of a drug candidate, reduce, or delay its development program or one or more of our other development programs, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to fund and undertake development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop any drug candidates or bring them to market.

Our drug discovery collaborators will have significant discretion in determining when to make announcements, if any, about the status of our collaborations, including about clinical developments and timelines for advancing collaborative programs, and the price of our common stock may decline as a result of announcements of unexpected results or developments.

Our drug discovery collaborators will have significant discretion in determining when to make announcements about the status of our collaborations, including about preclinical and clinical developments and timelines for advancing the collaborative programs. While as a general matter we intend to periodically report on the status of our collaborations, our drug discovery collaborators may wish to report such information more or less frequently than we intend to or may not wish to report such information at all unless legally required to do so. The price of our common stock may decline as a result of the public announcement of unexpected results or developments in our collaborations or as a result of our collaborators withholding such information.

If any current or future collaborators are unable to successfully complete clinical development, obtain regulatory approval for, or commercialize any drug candidates, or experience delays in doing so, our business may be materially harmed.

The success of any current or future collaborators' development and commercialization programs will depend on several factors associated with our collaborators' operations, including the following:

- acceptable data based on *in vitro* or *in silico* screenings;
- acceptable data at the completion of necessary preclinical studies to enable the initiation of clinical trials;
- successful enrollment of patients in, and the completion of, the clinical trials;
- acceptance by the FDA or other regulatory agencies of regulatory filings for any drug candidates we and our current or future collaborators may develop;
- expanding and maintaining a workforce of experienced scientists and others to continue to develop any drug candidates;
- obtaining and maintaining intellectual property protection and regulatory exclusivity for any drug candidates we and our current or future collaborators may develop;
- making arrangements with third-party manufacturers for, or establishing, clinical and commercial manufacturing capabilities;
- establishing sales, marketing, and distribution capabilities for drug products and successfully launching commercial sales, if and when approved;
- acceptance of any drug candidates we and our current or future collaborators may develop, if and when approved, by patients, the medical community, and third-party payors;
- effectively competing with other therapies;
- obtaining and maintaining coverage, adequate pricing, and adequate reimbursement from third-party payors, including government payors;
- patients' willingness to pay out-of-pocket in the absence of coverage and/or adequate reimbursement from third-party payors; or
- maintaining a continued acceptable safety profile following receipt of any regulatory approvals.

Many of these factors are beyond our control, including clinical outcomes, the regulatory review process, potential threats to our intellectual property rights, and the manufacturing, marketing, and sales efforts of any current or future collaborator. Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. If we or our current or future collaborators are unable to develop, receive marketing approval for, and successfully commercialize any drug candidates, or if we or they experience delays as a result of any of these factors or otherwise, we may need to spend significant additional time and resources, which would adversely affect our business, prospects, financial condition, and results of operations.

The use of any of our drug candidates in clinical trials may expose us to liability claims, which may cost us significant amounts of money to defend against or pay out, causing our business to suffer.

The nature of our business exposes us to potential liability risks inherent in the testing, manufacturing and marketing of our drug candidates. If any of our drug candidates enter clinical trials or become marketed products, they could potentially harm people or allegedly harm people possibly subjecting us to costly and damaging product liability claims. Some of the patients who participate in clinical trials are already ill when they enter a trial or may intentionally or unintentionally fail to meet the exclusion criteria. The waivers we obtain may not be enforceable and may not protect us from liability or the costs of product liability litigation. Although we intend to obtain product liability insurance that we believe is adequate, we are subject to the risk that our insurance will not be sufficient to cover claims. The insurance costs along with the defense or payment of liabilities above the amount of coverage could cost us significant amounts of money and management distraction from other elements of the business, causing our business to suffer.

Clinical trials are expensive, time-consuming and difficult to design and implement, and have traditionally had high attrition.

Before obtaining marketing approval from the FDA or other comparable foreign regulatory authorities for the sale of our drug candidates, we or our collaborators must complete preclinical development and extensive clinical trials to demonstrate the safety and efficacy of our drug candidates. We currently lack sufficient funding and are otherwise unable to carry out plans to design, fund and operate Phase 1 clinical trials, license our drug candidates or rely on our collaboration partners to undertake future clinical trial funding and related activities. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. We and our collaborators may experience delays in their clinical trials and it is unknown whether clinical trials will begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including delays related to:

- we and our collaboration partner's funding and operational execution;
- regulatory requirements for prolonged in vivo dosing regimens due to proposed treatment protocols;
- the FDA or comparable foreign regulatory authorities requiring additional preclinical assessment of the candidate or disagreeing as to the design or implementation of clinical studies;
- obtaining regulatory authorizations to commence a trial or consensus with regulatory authorities on trial designs;
- reaching agreement on acceptable terms with prospective contract research organizations, or "CROs", and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- diversion of healthcare resources to combat epidemics, such as the COVID-19 pandemic;
- obtaining institutional review board, or IRB, approval at each site, or independent ethics committee, or IEC, approval at any sites outside the United States;
- dependence on the needs and timing of third-party collaborators;
- changes to clinical trial protocols;
- recruiting suitable patients to participate in a trial in a timely manner and in sufficient numbers;
- clinical sites deviating from trial protocol or dropping out of a trial;
- addressing patient safety concerns that arise during the course of a trial;
- having patients complete a trial or return for post-treatment follow-up;
- imposition of a clinical hold by regulatory authorities, including as a result of unforeseen safety issues or side effects or failure of trial sites to adhere to regulatory requirements;
- the occurrence of serious adverse events in trials of the same class of agents conducted by other companies or institutions;
- subjects choosing an alternative treatment for the indications for which we are developing our drug candidates, or participating in competing trials;
- adding a sufficient number of clinical trial sites;
- manufacturing sufficient quantities of a drug candidate for use in clinical trials;
- challenges in transporting the drug candidate to investigation sites;
- lack of adequate funding to continue the clinical trial;

- selection of clinical end points that require prolonged periods of clinical observation or analysis of the resulting data;
- failure to meet deadlines for annual reports or untimely review of reports by regulators;
- a facility manufacturing our drug candidates or any of their components being ordered by the FDA or comparable foreign regulatory authorities to temporarily or permanently shut down due to violations of current good manufacturing practice, or cGMP, regulations or other applicable requirements, or infections or cross-contaminations of drug candidates in the manufacturing process;
- any changes to the manufacturing process that may be necessary or desired;
- third-party clinical investigators losing the licenses or permits necessary to perform the clinical trials, not performing clinical trials on anticipated schedule or consistent with the clinical trial protocol, good clinical practice, or GCP, or other regulatory requirements; or
- third-party contractors not performing data collection or analysis in a timely or accurate manner; or third-party contractors providing poor quality data that requires extensive cleansing; or third-party contractors becoming debarred or suspended or otherwise penalized by the FDA or other government or regulatory authorities for violations of regulatory requirements or of the US Foreign Corrupt Practices Act while conducting non-US trials, in which case we or our collaborators may need to find a substitute contractor, and we or our collaborators may not be able to use some or all of the data produced by such contractors in support of our marketing applications.

In addition, disruptions caused by pandemics or other public health crises may increase the likelihood that our collaborators encounter such difficulties or delays in initiating, enrolling, conducting or completing clinical trials or research and development. Our collaborators could encounter delays if a clinical trial is suspended or terminated by them, by the IRBs (or IECs) of the institutions in which such trials are being conducted, by the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. Furthermore, our collaborators may rely on CROs and clinical trial sites to ensure the proper and timely conduct of clinical trials and, while there may be agreements governing these activities, our collaborators would have limited influence over their actual performance.

Further, conducting clinical trials in foreign countries, as our collaborators may do for our current and future drug candidates, presents additional risks that may delay completion of clinical trials. These risks include the failure of enrolled patients in foreign countries to adhere to clinical protocol as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, failure to account for foreign currency exchange rates in budgeting and financial considerations, customs and trade practices in the shipment of drug substances, as well as political and economic risks relevant to such foreign countries.

If we or our collaborators experience delays in the completion of, or termination of, any clinical trial of our drug candidates, the commercial prospects of our drug candidates will be harmed, and our ability to generate product and/or license revenue from any of these drug candidates will be delayed. In addition, any delays in completing clinical trials will increase our collaborators' costs, slow down our drug candidate development and approval process and jeopardize the ability to commence product sales and generate revenue. Any of these occurrences may harm our business, financial condition and prospects significantly. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our drug candidates.

We and our collaborators will depend on enrollment of patients in their clinical trials in order to continue development of our drug candidates. If they are unable to enroll patients in those clinical trials, our and their research and development efforts could be adversely affected.

The timely completion of clinical trials in accordance with their protocols depends, among other things, on our collaborators' ability to enroll a sufficient number of patients who remain in the study until its conclusion. Our collaborators may experience difficulties in patient enrollment in their clinical trials for a variety of reasons. Patient enrollment is affected by many factors including the size and nature of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, the size of the patient population required for analysis of the trial's primary endpoints, the proximity of patients to study sites, our collaborators' ability to recruit clinical trial investigators with the appropriate competencies and experience, our collaborators' ability to obtain and maintain patient consents, the risk that patients enrolled in clinical trials will drop out of the trials before completion, and competing clinical trials and clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating. Our collaborators' ability to enroll patients in clinical trials may be impacted by governmental restrictions and diversion of healthcare resources resulting from the COVID-19 pandemic. Many pharmaceutical companies may conduct clinical trials in patients with the disease indications that our potential drug products may target. As a result, we and our collaborators may need to compete with them for clinical sites, physicians and the limited number of patients who fulfill the stringent requirements for participation in clinical trials. Also, due to the confidential nature of clinical trials, it is unknown how many of the eligible patients may be enrolled in competing studies and who are consequently not available for our collaborators' clinical trials. Our Phase 1 clinical trials or our collaborators' clinical trials may be delayed or terminated due to the inability to enroll enough patients. The delay or inability to meet planned patient enrollment may result in increased costs and delay or termination of the trials, which could have a harmful effect on our and our collaborators' ability to develop products.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming, expensive and inherently challenging, and if we or our collaborators are ultimately unable to obtain regulatory approval for our drug candidates, our business could be significantly limited.

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. The results of preclinical studies and early clinical trials of our drug candidates may not be predictive of the results of later-stage clinical trials. Drug candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. It is common for companies in the biopharmaceutical industry to suffer significant setbacks in advanced clinical trials due to nonclinical findings made while clinical studies were underway and safety or efficacy observations made in clinical studies, including previously unreported adverse events. Our collaborators' future clinical trial results may not be successful, and notwithstanding any potential promising results in earlier studies, we cannot be certain that we and our collaborators' will not face similar setbacks. The historical failure rate for drug candidates in our industry is high. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a drug candidate's clinical development, is subject to individual or review panel interpretation, and may vary among jurisdictions. We have not obtained regulatory approval for any drug candidate and it is possible that none of our existing drug candidates or any drug candidates we may seek to develop in the future will ever obtain regulatory approval.

Our drug candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our collaborators' clinical trials;
- we or our collaborators' may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a drug candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- the FDA or comparable foreign regulatory authorities may disagree with our or our collaborators' interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our drug candidates may not be sufficient to support the submission of a NDA, or Biologics License Application ("BLA"), or other submission or to obtain regulatory approval in the United States or elsewhere; the FDA or comparable foreign regulatory authorities may disagree that changes to branded reference drugs meet the criteria for the 505(b)(2) regulatory pathway or foreign regulatory pathways such as the hybrid medicinal product pathway;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we or our collaborators contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering clinical data insufficient for approval.

The lengthy approval process as well as the unpredictability of future clinical trial results may result in our or our collaborators failing to obtain regulatory approval to market our drug candidates, which would significantly harm our business, results of operations and prospects.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our potential drug candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, may approve a drug candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that drug candidate, may classify our drug candidates in a way that hinders market acceptance, and/or may restrict distribution of our approved drugs. Any of the foregoing scenarios could materially harm the commercial prospects for our potential drug candidates.

We have not previously submitted an NDA or BLA to the FDA or similar drug approval filings to comparable foreign authorities, for any drug candidate, and we cannot be certain that any of our drug candidates will be successful in clinical trials or receive regulatory approval. Further, our drug candidates may not receive regulatory approval even if they are successful in clinical trials. If we do not receive regulatory approvals for our drug candidates, we may not be able to continue our operations. Even if we successfully obtain regulatory approvals to market one or more of our drug candidates, our revenue will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval and have commercial rights. If the markets for patients that we or our collaborators are targeting for our drug candidates are not as significant as we estimate, we may not generate significant revenue from sales of such products, if approved.

We may plan to seek regulatory approval to commercialize our drug candidates in the United States, the European Union, and in additional foreign countries. While the scope of regulatory approval is similar in other countries, to obtain separate regulatory approval in many other countries we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of our drug candidates, and we cannot predict success in these jurisdictions.

Our success depends upon achieving a critical mass of customers and strategic relationships.

Our success is dependent upon achieving significant market acceptance and strategic relationships. To date, we have achieved only limited market acceptance and formed only limited strategic relationships. We do not know whether we will be able to create all the customer and strategic relationships necessary to make our business model function.

The degree of market acceptance and adoption of our products will depend on a number of factors, including cost, potential efficacy and potential advantages over alternatives, ease of use and quality, the strength of marketing and distribution support and timing of market introduction of competitive products and services, publicity concerning our products and services or competing products and services or the standards of our competitors who are trying to improve on their own stem cell development technologies. Another risk of adoption is changes in the allocated spending by these companies as our products come online, which is unpredictable and could hurt our business. Other changes in the healthcare landscape, including current treatments and reimbursements, will impact interest in adopting our technology.

Even if a product or service displays a favorable efficacy in development, market acceptance of the product or service will not be known until after it is launched. Our efforts to educate the medical community on the benefits of our products and services may require significant resources and may never be successful. Such efforts to educate the marketplace may require more resources than are required by the conventional technologies marketed by our competitors, particularly due to the novelty of our approach. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenue and may not become profitable.

If our laboratory facilities become damaged or inoperable, or we are required to vacate any facility, the ability to provide services may be jeopardized.

We currently derive substantially all revenue from preclinical services. Our facilities and equipment could be harmed or rendered inoperable by natural or man-made disasters, including fire, flooding and power outages, which may render it difficult or impossible for us to perform tests or provide laboratory services for some period of time. The inability to perform services or the backlog of projects that could develop if any of our facilities is inoperable for even a short period of time may result in the loss of customers or harm to our reputation or relationships with key researchers, collaborators, and customers, and we may be unable to regain those customers or repair our reputation in the future. Furthermore, our facilities and the equipment used to perform research and development work could be costly and time-consuming to repair or replace.

If we use biological and hazardous materials in a manner that causes injury, we could be liable for damages.

Our activities currently require the controlled use of potentially harmful biological materials and hazardous materials and chemicals. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject to, on an ongoing basis, federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. The cost of compliance with these laws and regulations may become significant and could have a material adverse effect on the financial condition, results of operations and cash flows. In the event of an accident or if we otherwise fail to comply with applicable regulations, we could lose permits or approvals or be held liable for damages or penalized with fines.

Cyber-attacks or other failures in telecommunications or information technology systems could result in information theft, data corruption and significant disruption of our business operations.

We depend on information technology and telecommunications systems for significant aspects of operations. These information technology and telecommunications systems support a variety of functions, including test processing, sample tracking, quality control, customer service and support, billing, and general and administrative activities. Information technology and telecommunications systems are vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious human acts and natural disasters. In May of 2019, an unknown individual gained unauthorized access to the then StemoniX chief executive officer's email account and fraudulently sent an email instructing an employee to wire company funds to a bank account. As a result of this breach, we suffered financial loss of $109,000. In response, StemoniX implemented additional information technology security precautions, including enhanced e-mail security software, employee training, verbal acknowledgement of requests for payment and dual authorization payment controls at a new bank, as well as hired our current Chief Financial Officer. However, we can provide no assurances that a cyber-attack or security breach will not occur again. If we are subjected to one or more cyber-attacks or security breaches, we would suffer additional financial loss. Furthermore, as use of digital technologies has increased, cyber incidents, including deliberate attacks and attempts to gain unauthorized access to computer systems and networks, have increased in frequency and sophistication and make us even more at risk. These threats pose a risk to the security of our systems and networks, the confidentiality and the availability and integrity of our data. Any disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could have an adverse effect on business.

Our business model and technology are evolving and unproven.

Our historic StemoniX business model is relatively new, unproven, and likely to continue to evolve. Accordingly, our business model may not be successful, and it may need to be changed. Our ability to generate significant revenue will depend, in large part, on its ability to successfully market its products. We intend to continue to develop our business model as the market for our products and services continues to evolve.

In addition, the technology our business model depends on is rapidly changing. Our current model is based on current knowledge and technologies in stem cell sciences, which change frequently. These changes may soon cause our current model to be less relevant, decreasing potential business revenue.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials as well as known and novel therapeutic drug candidates. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources.

We also could incur significant costs associated with civil or criminal fines and penalties. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Although we maintain workers' compensation insurance to cover us for costs and expenses, we may incur due to injuries to our employees resulting from the use of hazardous materials or other work-related injuries, this insurance may not provide adequate coverage against potential liabilities. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions or liabilities, which could materially adversely affect our business, financial condition, results of operations and prospects.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our drug candidates and affect the prices we may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval for our drug candidates, restrict or regulate post-approval activities and affect our ability to profitably sell our drug candidates. Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We do not know whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our drug candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

In the United States, under the Medicare Modernization Act, or MMA, Medicare Part D provides coverage to the elderly and disabled for outpatient prescription drugs by approving and subsidizing prescription drug plans offered by private insurers. The MMA also authorizes Medicare Part D prescription drug plans to use formularies where they can limit the number of drugs that will be covered in any therapeutic class. The Part D plans use their formulary leverage to negotiate rebates and other price concessions from drug manufacturers. Also under the MMA, Medicare Part B provides coverage to the elderly and disabled for physician-administered drugs on the basis of the drug's average sales price, a price that is calculated according to regulatory requirements and that the manufacturer reports to Medicare quarterly.

Both Congress and the Centers for Medicare & Medicaid Services (CMS), the agency that administers the Medicare program, from time to time consider legislation, regulations, or other initiatives to reduce drug costs under Medicare Parts B and D. For example, under the 2010 Affordable Care Act, drug manufacturers are required to provide a 50% discount on prescriptions for branded drugs filled while the beneficiary is in the Medicare Part D coverage gap, also known as the "donut hole." There have been legislative proposals to repeal the "non-interference" provision of the MMA to allow CMS to leverage the Medicare market share to negotiate larger Part D rebates. Further cost reduction efforts could decrease the coverage and price that we receive for our drug candidates and could seriously harm our business. Private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates, and any reduction in reimbursement under the Medicare program may result in a similar reduction in payments from private payors.

The 2010 Affordable Care Act is intended to broaden access to health insurance and reduce or constrain the growth of healthcare spending. Further, the Affordable Care Act imposes a significant annual fee on companies that manufacture or import branded prescription drug products. It also increased the amount of the rebates drug manufacturers must pay to state Medicaid programs, required that Medicaid rebates be paid on managed Medicaid utilization, and increased the additional rebate on "line extensions" (such as extended-release formulations) of solid oral dosage forms of branded products. The law also contains substantial provisions affecting fraud and abuse compliance and transparency, which may require us to modify our business practices with healthcare practitioners and incur substantial costs to ensure compliance.

In addition, other legislative changes that affect the pharmaceutical industry have been proposed and adopted in the United States since the ACA was enacted. For example, the Inflation Reduction Act of 2022 included, among other things, a provision that authorizes CMS to negotiate a "maximum fair price" for a limited number of high-cost, single-source drugs every year, and another provision that requires drug companies to pay rebates to Medicare if prices rise faster than inflation. In addition, various states have adopted or are considering adopting laws that require pharmaceutical companies to provide notice prior to raising prices and to justify price increases. We expect that additional healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, and in turn could significantly reduce the projected value of certain development projects and reduce our profitability.

Future governmental regulation or lack of regulatory approvals of the industry could affect our business.

Legislative and regulatory proposals are continuously under consideration by federal, state, local, and foreign governmental organizations, and it is possible that laws or regulations may exist or may be adopted with respect to our industry. The adoption of any such laws or regulations may decrease the growth in the use of our products, our ability to attract and retain personnel, increase our cost of doing business, or otherwise have a material adverse effect on our business. Regulatory changes or failure to comply with existing regulations could adversely affect our business and financial condition and results of operations. We may need to obtain regulatory approvals in the use of stem cells and our other technologies and may not receive these approvals. We also may not receive approvals for our potential therapeutic applications. We would be unable to act without approval, as that would be a regulatory violation and expose the business to significant liability.

We are exposed to the risks of natural and man-made catastrophes, pandemics and malicious and terrorist acts that could materially adversely affect our business, financial condition and results of operations.

Natural and man-made catastrophes, pandemics, and malicious and terrorist acts present risks that could materially adversely affect our results of operations. While we have taken steps to identify and mitigate these risks, such risks cannot be predicted, nor fully protected against even if anticipated. In addition, such events could result in overall macroeconomic volatility or specifically a decrease or halt in economic activity in large geographic areas, adversely affecting the marketing or operation of our business within such geographic areas or the general economic climate, which in turn could have an adverse effect on our business, operations and financial condition.

In particular, the COVID-19 outbreak, which has been declared a global pandemic by the World Health Organization, has significantly and negatively impacted financial markets and economic conditions in the United States and globally. As a result, our operations have been, and may be further, negatively impacted. Consequently, our business, financial condition and results of operations has been, and could be further, significantly and adversely affected.

Disruptions in the global economy and supply chains may have a material adverse effect on our business, financial condition and results of operations.

The disruptions to the global economy in 2020 and into 2021 have impeded global supply chains, resulting in longer lead times and also increased critical component costs and freight expenses. We have taken and may have to take steps to minimize the impact of these disruptions in lead times and increased costs by working closely with our suppliers and other third parties on whom we rely for the conduct of our business. Despite the actions we have undertaken or may have to undertake to minimize the impacts from disruptions to the global economy, there can be no assurances that unforeseen future events in the global supply chain will not have a material adverse effect on our business, financial condition and results of operations.

Furthermore, inflation can adversely affect us by increasing the costs of clinical trials, the research and development of our product candidates, as well as administration and other costs of doing business. We may experience increases in the prices of labor and other costs of doing business. In an inflationary environment, cost increases may outpace our expectations, causing us to use our cash and other liquid assets faster than forecasted. If this happens, we may need to raise additional capital to fund our operations, which may not be available in sufficient amounts or on reasonable terms, if at all, sooner than expected.

Adverse global conditions, including economic uncertainty, may negatively impact our financial results.

Global conditions, dislocations in the financial markets, any negative financial impacts affecting United States as a result of tax reform or changes to existing trade agreements or tax conventions, may adversely impact our business.

In addition, the global macroeconomic environment could be negatively affected by, among other things, COVID-19 or other pandemics or epidemics, instability in global economic markets, increased U.S. trade tariffs and trade disputes with other countries, instability in the global credit markets, supply chain weaknesses, instability in the geopolitical environment as a result of the withdrawal of the United Kingdom from the European Union, the Russian invasion of Ukraine and other political tensions, and foreign governmental debt concerns. Such challenges have caused, and may continue to cause, uncertainty and instability in local economies and in global financial markets.

Our ability to obtain compounds used for drug discovery and development could be affected as a result of the tensions between Ukraine and Russia.

Certain of our collaborators purchase a significant portion of their supply of systemized compounds used for drug discovery and development from a supplier headquartered in Ukraine. Russia's invasion of Ukraine temporarily disrupted our supplies. If we and our collaborators are unable to continue to obtain supplies from Ukraine or secure one or more replacement suppliers capable of production at a substantially equivalent cost, our developmental efforts could be delayed and our costs increased, and our business, financial condition and results of operation could be adversely affected.

Our business is subject to risks arising from epidemic diseases, such as the global outbreak of COVID-19.

The outbreak of COVID-19, which has been declared by the World Health Organization to be a pandemic, has spread across the globe and is impacting worldwide economic activity. A pandemic, including COVID-19 or other public health epidemic, poses the risk that we or our employees, contractors, suppliers, courier delivery services and other partners may be prevented from conducting business activities for an indefinite period of time, including due to spread of the disease within these groups or due to shutdowns that may be requested or mandated by governmental authorities.

The continued spread of COVID-19 and its variants, and the measures taken by the governments of countries affected could disrupt the supply chain of material needed for our business and could delay future projects from commencing due to COVID-19 related impacts on the demand for our services and therefore have a material adverse effect on business, financial condition and results of operations.

Many of our customers worldwide were impacted by COVID-19 and temporarily closed their facilities which impacted revenue in the first half of 2020 for our StemoniX business. While the impact of the pandemic on our business has lessened, the global outbreak of COVID-19 continues with new variants and is impacting the way we operate our business as well as in certain circumstances limiting the availability of lab supplies. The extent to which the COVID-19 pandemic may impact the our future business will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the availability and effectiveness of vaccines, the duration of the outbreak, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions, and the effectiveness of actions taken in the United States and other countries to contain and treat the disease.

We are actively monitoring the impact of the COVID-19 pandemic on its business, results of operations and financial condition. The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition in the future is unknown at this time and will depend on future developments that are highly unpredictable.

Risks Related to Our Dependence on Third Parties

We expect that we will rely on third parties to assist us and our collaborators in conducting clinical trials for our drug candidates. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our drug candidates and our business would be substantially harmed.

We expect that we and our collaborators will enter into agreements with third-party CROs to assist our collaborators in conducting and managing their clinical programs, including contracting with clinical sites to perform clinical studies. We and our collaborators may rely on these parties for execution of clinical studies for our drug candidates, and they would control only certain aspects of conducting the clinical studies. Nevertheless, our collaborators will be responsible for ensuring that each of their studies is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and their reliance on CROs and clinical sites will not relieve them of their regulatory responsibilities. Such CROs will be required to comply with current Good Clinical Practices regulations, or cGCPs, which are regulations and guidelines enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area and comparable foreign regulatory authorities for any products in clinical development. The FDA enforces these cGCP regulations through periodic inspections of trial sponsors, principal investigators and trial sites. If our collaborators or their CROs fail to comply with applicable cGCPs, the clinical data generated in clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require our collaborators to perform additional clinical trials before approving their marketing applications. We cannot assure you that, upon inspection, the FDA will determine that any of the clinical trials comply with cGCPs. In addition, clinical trials must be conducted with products produced under current Good Manufacturing Practices, or cGMP regulations and will require a large number of test subjects. The failure of us, our collaborators, CROs or clinical sites to comply with these regulations may require them to repeat clinical trials, which would delay the regulatory approval process and could also subject them to enforcement action up to and including civil and criminal penalties.

Although we expect our collaborators to design the clinical trials for our drug candidates in consultation with CROs, we expect that the CROs will manage and assist our collaborators with the clinical trials conducted at contracted clinical sites. As a result, many important aspects of our drug development programs would be outside of our collaborators' direct control. In addition, the CROs and clinical sites may not perform all of their obligations under arrangements with us or our collaborators or in compliance with regulatory requirements. If the CROs or clinical sites do not perform clinical trials in a satisfactory manner, or if they breach their obligations to our collaborators or fail to comply with regulatory requirements, the development and commercialization of our drug candidates for the subject indications may be delayed or our development program materially and irreversibly harmed. We cannot control the amount and timing of resources these CROs and clinical sites will devote to our program or our drug candidates. If our collaborators are unable to rely on clinical data collected by CROs through the clinical research sites, our collaborators could be required to repeat, extend the duration of, or increase the size of clinical trials, which could significantly delay commercialization and require significantly greater expenditures.

If any of our collaborators' relationships with these third-party CROs or clinical sites terminate, our collaborators may not be able to enter into arrangements with alternative CROs or clinical sites. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to clinical protocols, regulatory requirements or for other reasons, any such clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for or successfully commercialize our drug candidates. As a result, our financial results and the commercial prospects for our drug candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

We expect that we will rely on third parties to assist us and our collaborators in formulation and manufacture of our drug candidates and approved drugs. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval for our drug candidates or commercialize approved drugs and our business would be substantially harmed.

We do not currently, nor do we expect in the future to, have expertise in the formulation and manufacturing of drug candidates for use in clinical trials or commercial drug products. As such, we expect to engage a contract manufacturing organization ("CMO") for the formulation, production, packaging, and distribution of high-quality drug products in sufficient quantities for clinical trials and market entry. These products must meet FDA and other regulatory authority standards for quality, strength, and potency. Regulatory authorities require submission of manufacturing specification in the IND application, which must adhere to quality standards and be manufactured according to guidance on cGMP.

The CMO is reliant on the availability of the active pharmaceutical ingredient ("API") in sufficient quantities to meet the requirements for the production of the specified dosage form for the clinical trial as well as subsequent manufacturing requirements for the marketed drug. The CMO may manufacture the API in-house or contract with a third-party chemical manufacturer to supply the API in sufficient quantity. If the CMO or the third-party API supplier are not able to produce the API or drug product because of scarcity of raw materials, manufacturing equipment malfunction, manufacturing facility inoperability or damage, disruption of shipping or transport logistics, or other unplanned for complications the approval of the IND will be delayed until a replacement CMO can be secured. Likewise, disruptions to the production of the dosage form for marketed drug manufacture will delay the final approval of the NDA or BLA or will affect our ability to enter the market. If the CMO fails to meet quality standards in the manufacture of the drug product for any reason, significant delays in the availability of the product will adversely affect the availability of the marketed product.

We require third-party relationships that may not provide needed services. If such collaborators or partners fail to perform as expected the potential for us to generate future revenue from our technologies and products and services would be significantly reduced and our business would be harmed.

Many aspects of our business require third-party relationships, including but not limited to equipment, materials, technology, knowledge, sales, business development and distribution. We also utilize a number of banking, payroll, enterprise software and computer applications, and data storage that relay upon third-party vendors and cloud-based applications.

Specific and unique material needs are human cells and co-factors to support the growth and development of those cells. These partners may not allocate the resources, including time and capital, necessary to supply whatever is needed for our business. This and other issues may require termination or conflict with partners that our business model depends upon.

Our current and any future partnerships are subject to numerous risks, including:

- partners have significant discretion in determining the efforts and resources that they will apply to the partnerships;
- partners may not perform their obligations as expected or fail to fulfill their responsibilities in a timely manner, or at all;
- we may not have access to, or may be restricted from disclosing, certain information regarding products or services being developed or commercialized under a partnership and, consequently, may have limited ability to inform our shareholders about the status of such developments;
- partners could independently develop, or develop with third parties, products that compete directly or indirectly with ours if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- products or services developed with partners may be viewed by our partners as competitive with their own products or services, which may cause partners to stop work on our behalf; or
- partners may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation.

In addition, certain partnership agreements provide our partners with rights to terminate such agreements, which rights may or may not be subject to conditions, and which rights, if exercised, could adversely affect our product development efforts and could make it difficult for us to attract new partners. In that event: we would likely be required to limit the size and scope of efforts for the development and commercialization; we would likely be required to seek additional financing to fund further development or identify alternative strategic collaborations; our potential to generate future revenue from royalties and milestone payments would be significantly reduced, delayed or eliminated; and it could have an adverse effect on our business and future growth prospects.

If conflicts arise with our partners, collaborators or licensors, they may act in their own self-interest, which may be adverse to the interests of our Company.

We may in the future experience disagreements with our partners, collaborators or licensors. Conflicts may arise in our collaboration and license arrangements with third parties due to one or more of the following:

- disputes with respect to milestone or payments that are believed due under the applicable agreements;
- disagreements with respect to the ownership of intellectual property rights or scope of licenses;
- disagreements with respect to the scope of any obligations;
- unwillingness on the part of a partner or collaborator to keep us informed regarding the progress of its activities; and
- disputes with respect to our efforts with respect to the agreement with a partner or collaborator.

Conflicts with our partners, collaborators or licensors could materially adversely affect our business, financial condition or results of operations and future growth prospects.

A partner may choose to violate confidentiality agreements or use knowledge of our business operations to compete, decreasing our potential collaborators and increasing competition, which could lead to a loss of business revenue.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we collaborate with various organizations and academic institutions, we must, at times, share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with our collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, such as trade secrets.

Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may have a material adverse effect on our business. A competitor's discovery of our trade secrets would impair our competitive position and have an adverse impact on our business.

Intellectual Property Risks Relating to Our Business

If we are unable to obtain and maintain patent and other intellectual property protection for our products and processes, or if the scope of the patent and other intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our technology and products may be adversely affected.

Our ability to compete effectively will depend, in part, on our ability to maintain the proprietary nature of our technology and processes. We rely on know-how, patents, trade secrets, license agreements and contractual provisions to establish our intellectual property rights and protect our products. These legal means, however, afford only limited protection and may not adequately protect our rights.

Through our StemoniX subsidiary, we currently have nine patent applications pending in the United States. The main risks related to these patent applications is that the underlying patents will not be issued, or if they are issued, that the technology will still be used or challenged by competitors. If the patents are issued and need to be defended from lawsuits, such defense would require significant time and financial costs, and there is the risk of losing the challenge. In addition, we may not be issued similar patent rights throughout the world. These risks apply to any of our trademarks as well. Furthermore, competitors may allege that our business infringes on their intellectual property. If challenged, there will be legal costs and the risk of loss, even if such allegations are false.

Moreover, the patent application and approval process is expensive and time-consuming. We may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. Furthermore, we, or any future partners, collaborators, or licensees, may fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Therefore, we may miss potential opportunities to seek additional patent protection. If we fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If there are material defects in the form, preparation, prosecution or enforcement of our patents or patent applications, such patents may be invalid and/or unenforceable, and such applications may never result in valid, enforceable patents.

Even if they are unchallenged, our patents and patent applications, if issued, may not provide us with any meaningful protection or prevent competitors from designing around our patent claims by developing similar or alternative technologies in a non-infringing manner. For example, a third party may develop a competitive technology that is similar to ours, but that falls outside the scope of our patent protection. If the patent protection provided by the patents and patent applications we hold or pursue is not sufficiently broad to impede such competition, our ability to successfully commercialize our technology could be negatively affected.

In addition to patent protection, we expect to rely heavily on trade secrets, know-how and other unpatented technology, which are difficult to protect. Although we seek such protection in part by entering into confidentiality agreements with our vendors, employees, consultants and others who may have access to proprietary information, we cannot be certain that these agreements will not be breached, adequate remedies for any breach would be available, or our trade secrets, know-how and other unpatented proprietary technology will not otherwise become known to or be independently developed by our competitors. If we are unsuccessful in protecting our intellectual property rights, sales of our products may suffer and our ability to generate revenue could be severely impacted.

Our rights to use technologies licensed from third parties are not within our control and may we lose existing rights or may not be able to obtain new rights on reasonable terms.

We are heavily dependent on licensed in technology in order to operate our business. We license multiple patents and protocols from the University of California, San Diego, as well as from (1) Academia Japan for technology that we need in order to create and sell induced pluripotent stem cells, (2) ID Pharma for the Sendai virus vector technology, and (3) the Max Plank Innovation GmbH for mid-brain organoid production. None of these licenses are exclusive. In addition, we may need to obtain additional licenses that are also non-exclusive. The lack of exclusivity could decrease the barriers of entry for potential competitors. Additionally, if one or more of our license agreements terminates, we may not be able to enter into new license agreements for comparable technology or on comparable terms.

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

Our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We rely on both registration and common law protection for our trademarks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. During trademark registration proceedings, we may receive rejections. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

We may become involved in lawsuits or other proceedings to protect or enforce patents or other intellectual property rights, which could be time-consuming and costly to defend, and could result in loss of significant rights and the assessment of treble damages.

From time to time we may face intellectual property infringement (or misappropriation) claims from third parties. Some of these claims may lead to litigation. The outcome of any such litigation can never be guaranteed, and an adverse outcome could affect us negatively. For example, were a third-party to succeed on an infringement claim against us, we may be required to pay substantial damages (including up to treble damages if such infringement were found to be willful). In addition, we could face an injunction, barring us from conducting the allegedly infringing activity. The outcome of the litigation could require us to enter into a license agreement which may not be pursuant to acceptable or commercially reasonable or practical terms or which may not be available at all. It is also possible that an adverse finding of infringement against us may require us to dedicate substantial resources and time in developing non-infringing alternatives, which may or may not be possible. In the case of diagnostic tests, we would also need to include non-infringing technologies which would require us to re-validate tests. Any such re-validation, in addition to being costly and time consuming, may be unsuccessful.

Furthermore, we may initiate claims to assert or defend intellectual property against third parties. Any intellectual property litigation, irrespective of whether we are the plaintiff or the defendant, and regardless of the outcome, is expensive and time-consuming, and could divert management's attention from our business and negatively affect operating results or financial condition. We may not be able to prevent, alone or with third-party collaborators or suppliers, misappropriation of our proprietary rights, particularly in countries where the laws may not protect those rights as fully as in the United States. In addition, interference proceedings brought by the United States Patent and Trademark Office ("USPTO") may be necessary to determine the priority of inventions with respect to patents and patent applications or those of our current or future collaborators, suppliers or customers.

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

We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our current and former employees, including our senior management, were previously employed at universities or at other biotechnology or pharmaceutical companies, including some which may be competitors or potential competitors. Some of these employees may be subject to proprietary rights, non-disclosure and non- competition agreements, or similar agreements, in connection with such previous employment. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such third party. Litigation may be necessary to defend against such claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or sustain damages. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such a license may not be available on commercially reasonable terms or at all. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

In addition, while we typically require our employees, consultants and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own, which may result in claims by or against us related to the ownership of such intellectual property. If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to our senior management and scientific personnel.

Issued patents covering our technology or products could be found invalid or unenforceable if challenged in court or in administrative proceedings. We may not be able to protect our trade secrets in court.

If we initiate legal proceedings against a third-party to enforce a patent, should such a patent issue, the defendant could counterclaim that the patent covering is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, written description or non- enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld information material to patentability from the USPTO, or made a misleading statement, during prosecution. Third parties also may raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. An adverse determination could result in the revocation or cancellation of, or amendment to, our patents. Such a loss of patent protection could have a material adverse impact on our business.

In addition, our trade secrets may otherwise become known or be independently discovered by competitors. Competitors and other third parties could attempt to replicate some or all of the competitive advantages we derive from our development efforts, willfully infringe, misappropriate or otherwise violate our intellectual property rights, design around our protected technology or develop their own competitive technologies that fall outside of our intellectual property rights. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If our trade secrets are not adequately protected or sufficient to provide an advantage over our competitors, our competitive position could be adversely affected, as could our business. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating our trade secrets.

We may be subject to claims challenging the inventorship or ownership of the patents and other intellectual property.

We may be subject to claims that former employees, collaborators or other third parties have an ownership interest in the patents and intellectual property that we own or that we may own or license in the future. While it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own or such assignments may not be self-executing or may be breached. We could be subject to ownership disputes arising, for example, from conflicting obligations of employees or consultants. Litigation may be necessary to defend against any claims challenging inventorship or ownership. If we or fail in defending any such claims, we may have to pay monetary damages and may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property, which could adversely impact our business, results of operations and financial condition.

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

We may enter into license agreements in the future. We expect that such license agreements will impose, various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with our obligations under these licenses, our licensors may have the right to terminate these license agreements. Termination of these license agreements or reduction or elimination of our licensed rights may also result in our having to negotiate new or reinstated licenses with less favorable terms.

If we do not obtain patent term extension and exclusivity, our business may be materially harmed.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our proprietary technology are obtained, once the patent life has expired, we may be open to competition from competitive products. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

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

Filing, prosecuting, maintaining, defending and enforcing patents in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States could be less extensive than those in the United States. The requirements for patentability may differ in certain countries, particularly in developing countries; thus, even in countries where we do pursue patent protection, there can be no assurance that any patents will issue. There can be no assurance that we will obtain or maintain patent rights in or outside the United States under any future license agreements. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in countries outside the United States, even in jurisdictions where we pursue patent protection, or from selling or importing technologies or products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not pursued and obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These competitors may compete with us, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Risks Related to Employee Matters and Managing Growth

We only have a limited number of employees to manage and operate our business.

As of March 15, 2023, we had 8 employees, including 1 with a Ph.D. degree in our continuing Vyant Bio and StemoniX operations. Of these employees, 4 support our research and development and historical manufacturing capabilities and 4 are general and administrative. Our focus on the development of our drug candidates and disease models requires us to optimize cash utilization and to manage and operate our business in a highly efficient manner. We cannot assure you that we will be able to retain adequate staffing levels.

There is a scarcity of experienced professionals in our industry. If we are not able to retain and recruit personnel with the requisite technical skills, we may be unable to successfully execute the business strategy.

The specialized nature of our industry results in an inherent scarcity of experienced personnel in the field. Our future success depends upon the ability to attract and retain highly skilled personnel (including medical, scientific, technical, commercial, business, regulatory and administrative personnel) necessary to support anticipated growth, develop business and perform certain contractual obligations. Given the scarcity of professionals with the scientific knowledge that we require and the competition for qualified personnel among life science businesses, we may not succeed in attracting or retaining the personnel required to continue and grow operations. The loss of a key employee, the failure of a key employee to perform in his or her current position or our inability to attract and retain skilled employees could result in the inability to continue to grow our business or to implement business strategy.

The loss or transition of any member of our senior management team or the inability to attract and retain highly skilled scientists, clinicians and salespeople could adversely affect our business.

Our success depends on the skills, experience, and performance of our senior management. In the first quarter of 2023, in connection with the Company's Cash Preservation Plan the Company's CEO and CSO left the Company leaving the Company with one senior member of the management. The loss of our remaining senior management team member could adversely impact our ability to execute strategic alternatives and/or wind down the business.

Our officers and directors have significant influence over critical decisions.

Our officers and directors have a significant stake in the Company and are likely to have influence over any critical decisions relating to the Company. Our officers and directors beneficially own, directly or indirectly, approximately 9.8% of our outstanding common stock as of March 15, 2023. As a result, such individuals are likely to continue to have a significant influence in determining the outcome of any matter submitted to the shareholders for approval (including the election of directors and any merger, consolidation or sale of all or substantially all of the Company's assets) and to have significant influence in the management and affairs of the Company. The interests of the officers and directors may differ from the interests of other shareholders due to various factors, which may include the differing price at which they acquired their ownership in the Company as compared to other shareholders, the significant investment of personal time and effort by the officers and directors into the Company, and differing views on the effect of sunk costs with regard to potential future liquidity events.

Our employees, independent contractors, consultants, collaborators and contract research organizations may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements, which could cause significant liability for us and harm our reputation.

We are exposed to the risk that our employees, independent contractors, consultants, collaborators and contract research organizations may engage in fraudulent conduct or other illegal activity. Misconduct by those parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates: (1) FDA regulations or similar regulations of comparable non-U.S. regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities, (2) manufacturing standards, (3) federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by comparable non-U.S. regulatory authorities, and (4) laws that require the reporting of financial information or data accurately. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing, bribery and other abusive practices. These laws and regulations restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee or collaborator misconduct could also involve the improper use of, including trading on, information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted and maintained a code of conduct and in connection with the merger, we intend to maintain our code of conduct and business ethics, but it is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws, standards or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of civil, criminal and administrative penalties, damages, monetary fines, imprisonment, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could have a material adverse effect on our ability to operate our business and our results of operations.

Risks Relating to Our Common Stock

The price of our common stock has been and could remain volatile, and the market price of common stock may decrease.

The market price of our common stock has historically experienced and may continue to experience significant volatility. From March 31, 2022 through March 15, 2023, the market price of our common stock has fluctuated from a high of $7.00 per share in the second quarter of 2022 to a low of $0.60 in the first quarter of 2023. Market prices for securities of development-stage life sciences companies have historically been particularly volatile. The factors that may cause the market price of our common stock to fluctuate include, but are not limited to:

- progress, or lack of progress, in developing and commercializing our drug discovery candidates;
- our ability to recruit and retain qualified regulatory and research and development personnel;
- changes in the relationship with key collaborators, suppliers, customers and third parties;

- changes in the market valuation or earnings of competitors or companies viewed as similar to us;
- changes in key personnel;
- depth of the trading market in our common stock;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- the granting or exercise of employee stock options or other equity awards;
- realization of any of the risks described under this section titled "Risk Factors;" and
- general market and economic conditions.

In addition, the equity markets have experienced significant price and volume fluctuations that have affected the market prices for the securities of newly public companies for a number of reasons, including reasons that may be unrelated to business or operating performance. These broad market fluctuations may result in a material decline in the market price of our common stock and you may not be able to sell your shares at prices you deem acceptable. In the past, following periods of volatility in the equity markets, securities class action lawsuits have been instituted against public companies. Such litigation, if instituted against us, could result in substantial cost and the diversion of management attention.

We are currently listed on The Nasdaq Capital Market. If we are unable to maintain listing of our securities on The Nasdaq Capital Market or any stock exchange, our stock price could be adversely affected and the liquidity of our stock and our ability to obtain financing could be impaired and it may be more difficult for our stockholders to sell their securities.

Although our common stock is currently listed on The Nasdaq Capital Market, we may not be able to continue to meet the exchange's minimum listing requirements or those of any other national exchange. If we are unable to maintain listing on Nasdaq or if a liquid market for our common stock does not develop or is sustained, our common stock may remain thinly traded.

The Listing Rules of Nasdaq require listing issuers to comply with certain standards in order to remain listed on its exchange. If, for any reason, we should fail to maintain compliance with these listing standards and Nasdaq should delist our securities from trading on its exchange and we are unable to obtain listing on another national securities exchange, a reduction in some or all of the following may occur, each of which could have a material adverse effect on our stockholders:

- the liquidity of our common stock;
- the market price of our common stock;
- our ability to obtain financing for the continuation of our operations;
- the number of institutional and general investors that will consider investing in our common stock;
- the number of investors in general that will consider investing in our common stock;
- the number of market makers in our common stock;
- the availability of information concerning the trading prices and volume of our common stock; and
- the number of broker-dealers willing to execute trades in shares of our common stock.

We are not currently in compliance with the continued listing requirements for The Nasdaq Capital Market. If we do not regain compliance and continue to meet the continued listing requirements, our common stock may be delisted from The Nasdaq Capital Market, which could affect the market price and liquidity for our common stock and reduce our ability to raise additional capital.

Our common stock is listed on The Nasdaq Capital Market. In order to maintain that listing, we must satisfy minimum financial and other requirements including, without limitation, a requirement that listed securities maintain a minimum closing bid price of $1.00 per share. On March 20, 2023, we received a written notice (the "Notice") from the Listing Qualifications Department of The Nasdaq Stock Market ("Nasdaq") indicating that we are not in compliance with the $1.00 Minimum Bid Price requirement set forth in Nasdaq Listing Rule 5550(a)(2) for continued listing on The Nasdaq Capital Market (the "Bid Price Requirement"). The Notice does not result in the immediate delisting of our common stock from The Nasdaq Capital Market.

Based upon the closing bid price of our common stock for the prior 30 consecutive business days, we no longer meet this requirement. The Nasdaq rules provide us a compliance period of 180 calendar days from the date of the Notice in which to regain compliance with the Bid Price Requirement. As a result, the date by which we have to regain compliance with the Bid Price Requirement is September 18, 2023. If at any time prior to September 18, 2023 the bid price of our common stock closes at or above $1.00 per share for a minimum of 10 consecutive business days (or longer at Nasdaq's discretion), the Nasdaq staff (the "Staff") will provide us with a written confirmation of compliance and the matter will be closed.

Alternatively, if we fail to regain compliance with the Bid Price Requirement prior to the expiration of the initial period, we may be eligible for an additional 180 calendar day compliance period, provided (i) we meets the continued listing requirement for market value of publicly held shares and all other applicable requirements for initial listing on The Nasdaq Capital Market (except for the Bid Price Requirement) and (ii) we provide written notice to Nasdaq of our intention to cure this deficiency during the second compliance period by effecting a reverse stock split, if necessary. In the event we do not regain compliance with the Bid Price Requirement prior to the expiration of the initial period, and if it appears to the Staff that we will not be able to cure the deficiency, or if we are not otherwise eligible, the Staff will provide us with written notification that our securities are subject to delisting from The Nasdaq Capital Market. At that time, we may appeal the delisting determination to a hearings panel.

We intend to monitor the closing bid price of our common stock and are considering our options with respect to compliance with the Bid Price Requirement. However, there can be no assurance that we will regain compliance with the Bid Price Requirement during the 180-day compliance period, secure a second period of 180 days to regain compliance, or maintain compliance with any other Nasdaq listing requirements.

If we fail to regain compliance with the Bid Price Requirement or to meet the other applicable continued listing requirements for The Nasdaq Capital Market in the future, and Nasdaq determines to delist our common stock, the delisting could adversely affect the market price and liquidity of our common stock and reduce our ability to raise additional capital. In addition, if our common stock is delisted from The Nasdaq Capital Market and the trading price remains below $5.00 per share, trading in our common stock might also become subject to the requirements of certain rules promulgated under the Exchange Act, which require additional disclosure by broker-dealers in connection with any trade involving a stock defined as a "penny stock" (generally, any equity security not listed on a national securities exchange or quoted on Nasdaq that has a market price of less than $5.00 per share, subject to certain exceptions).

Reports published by securities or industry analysts, including projections in those reports that exceed actual results, could adversely affect our common stock price and trading volume.

Securities research analysts establish and publish their own periodic projections for our business. These projections may vary widely from one another and may not accurately predict the results we actually achieve. Our stock price may decline if the actual results do not match securities research analysts' projections. Similarly, if one or more of the analysts who authors reports on us downgrades our stock or publishes inaccurate or unfavorable research about our business, stock price could decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, our stock price or trading volume could decline. While we expect securities research analyst coverage, if no securities or industry analysts begin to cover us, the trading price for our stock and the trading volume could be adversely affected.

We are incurring significant costs and devotes substantial management time as a result of operating as a public company.

As a public company, we are incurring significant legal, accounting and other expenses. For example, in addition to being required to comply with certain requirements of the Sarbanes-Oxley Act of 2002, we are required to comply with certain requirements of the Dodd Frank Wall Street Reform and Consumer Protection Act, as well as rules and regulations subsequently implemented by the SEC, including the establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. We expect that compliance with these requirements will continue to increase legal and financial compliance costs and will make some activities more time consuming and costly. In addition, we expect that management and other personnel will continue to need to divert attention from operational and other business matters to devote substantial time to these public company requirements.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation and testing of internal control over financial reporting to allow management to report on the effectiveness of internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. In addition, if we lose status as a "non-accelerated filer," we will be required to have our independent registered public accounting firm attest to the effectiveness of internal control over financial reporting. Our compliance with Section 404 of the Sarbanes-Oxley Act, as applicable, requires us to incur substantial accounting expense and expend significant management efforts. We currently do not have an internal audit group, and we will need to continue to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. If we or the independent registered public accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by the NASDAQ, the SEC or other regulatory authorities, which would require additional financial and management resources.

Our ability to successfully implement our business plan and maintain compliance with Section 404, as applicable, requires us to be able to prepare timely and accurate financial statements. We expect that we will need to continue to improve existing, and implement new operational and financial systems, procedures and controls to manage our business effectively. Any delay in the implementation of, or disruption in the transition to, new or enhanced systems, procedures or controls, may cause operations to suffer and we may be unable to conclude that internal control over financial reporting is effective. If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report financial results, and current and potential stockholders may lose confidence in our financial reporting. This, in turn, could have an adverse impact on trading prices for our common stock, and could adversely affect our ability to access the capital markets.

Anti-takeover provisions of our certificate of incorporation, bylaws and Delaware law could make an acquisition of the Company, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove the current members of the board and management.

Certain provisions of our amended and restated certificate of incorporation and bylaws could discourage, delay or prevent a merger, acquisition or other change of control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. Furthermore, these provisions could prevent or frustrate attempts by our stockholders to replace or remove members of the board of directors. These provisions also could limit the price that investors might be willing to pay in the future for our common stock, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so. These provisions, among other things:

- authorize the board of directors to issue, without stockholder approval, preferred stock, the rights of which will be determined at the discretion of the board of directors and that, if issued, could operate as a "poison pill" to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that the board of directors does not approve;
- establish advance notice requirements for stockholder nominations to the board of directors or for stockholder proposals that can be acted on at stockholder meetings; and
- limit who may call a stockholder meeting.

In addition, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of the voting rights on our common stock, from merging or combining with the Company for a prescribed period of time.

Because we do not expect to pay cash dividends for the foreseeable future, you must rely on appreciation of our common stock price for any return on your investment. Even we change that policy, we may be restricted from paying dividends on our common stock.

We do not intend to pay cash dividends on shares of common stock for the foreseeable future. Any determination to pay dividends in the future will be at the discretion of the board of directors and will depend upon results of operations, financial performance, contractual restrictions, restrictions imposed by applicable law and other factors the board of directors deems relevant. Accordingly, you will have to rely on capital appreciation, if any, to earn a return on your investment in our common stock. Investors seeking cash dividends in the foreseeable future should not purchase our common stock.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2022, the Company has lease agreements for our three locations for continuing operations, including a 4,995 square foot research and development facility and office in San Diego, California, a 14,932 square foot lab, manufacturing and office in Maple Grove, Minnesota, and a 1,625 square foot corporate headquarters office in Cherry Hill, New Jersey. All leases have escalating payment schedules. The San Diego and Maple Grove leases expire in 2027 and the Cherry Hill lease expires on March 31, 2024. We believe that these facilities are adequate for our current needs. On March 9, 2023, the Company terminated its San Diego lease agreement with an early termination fee of $45 thousand.

Item 3. Legal Proceedings

We are not currently subject to any material legal proceedings. However, we may from time to time become a party to various legal proceedings arising in the ordinary course of our business.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information

The Company's common stock trades on The NASDAQ Stock Market LLC under the symbol "VYNT."

Holders

As of December 31, 2022, the Company had approximately 81 holders of record of the Company's common stock. The number of record holders was determined from the records of the transfer agent and does not include beneficial owners of common stock whose shares are held in the names of various security brokers, dealers, and registered clearing agencies. The transfer agent of the Company's common stock is Continental Stock Transfer & Trust, 1 State Street, 30th Floor, New York, New York, 10004.

Dividends

The Company has never declared dividends on the Company's equity securities, and currently does not plan to declare dividends on shares of the Company's common stock in the foreseeable future. The Company expects to retain future earnings, if any, for use in the operation and expansion of the Company's business. The payment of cash dividends in the future, if any, will be at the discretion of the board of directors and will depend upon such factors as earnings levels, capital requirements, overall financial condition and any other factors deemed relevant by the board of directors.

Item 6. Reserved.

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

As used herein, the "Company" refers to Vyant Bio, Inc. and its wholly owned subsidiaries: StemoniX, Inc. ("StemoniX") and *vivo*Pharm Pty Ltd ("*vivo*Pharm"), except as expressly indicated or unless the context otherwise requires. The following Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is intended to help facilitate an understanding of the Company's financial condition and its historical results of operations for the periods presented. This MD&A should be read in conjunction with the audited consolidated financial statements and notes thereto included in this annual report on Form 10-K. This MD&A may contain forward-looking statements that involve risks and uncertainties. For a discussion on forward-looking statements, see the information set forth in the Introductory Note to this Annual Report under the caption "Forward Looking Statements", which information is incorporated herein by reference.

Overview

Vyant Bio, Inc. (the "Company", "Vyant Bio", "VYNT" or "we"), is an innovative biotechnology company reinventing drug discovery for complex neurodevelopmental and neurodegenerative disorders. Our central nervous system ("CNS") drug discovery platform combines human-derived organoid models of brain disease, scaled biology, and machine learning. Our platform is designed to: (1) elucidate disease pathophysiology; (2) formulate key therapeutic hypotheses; (3) identify and validate drug targets, cellular assays, and biomarkers to guide candidate molecule selection; and (4) guide clinical trial patient selection and trial design. Our current programs are focused on identifying repurposed and novel small molecule clinical candidates for rare CNS genetic disorders including Rett Syndrome ("Rett"), CDKL5 Deficiency Disorders ("CDD") and familial Parkinson's Disease ("PD"). The Company's management believes that drug discovery needs to progressively shift as the widely used preclinical models for predicting safe and effective drugs have under-performed, as evidenced by the time and cost of bringing novel drugs to market. As a result, Vyant Bio is focused on combining sophisticated data science capabilities with highly functional human cell derived disease models. We leverage our ability to identify validated targets and molecular-based biomarkers to screen and test thousands of small molecule compounds in human diseased 3D brain organoids in order to create a unique approach to assimilating biological data that supports decision making iteratively throughout the discovery phase of drug development to identify both novel and repurposed drug candidates.

We have incurred substantial operating losses and have used cash in our operating activities since inception. On January 4, 2023, the Company announced that it had engaged LifeSci Capital as its financial advisor to assist in exploring a range of strategic alternatives focused on enhancing shareholder value. There can be no assurance that this review process will result in any changes to the Company's current business plans or lead to any specific action or transaction. On January 31, 2023 the Company's Board of Directors, approved a plan to preserve the Company's cash to be able to continue to pursue a satisfactory strategic alternative for the purpose of maximizing the value of the Company's business while also having sufficient cash to adequately fund an orderly wind down of the Company's operations (the "Cash Preservation Plan") in the event it is unable to secure a satisfactory strategic alternative. See further discussion regarding our liquidity and capital resources below.

Cancer Genetics, Inc. Merger

On March 30, 2021, Vyant Bio, formerly known as Cancer Genetics, Inc. ("CGI"), completed its business combination (the "Merger") with StemoniX, Inc., a Minnesota corporation ("StemoniX"), in accordance with the Agreement and Plan of Merger and Reorganization, dated as of August 21, 2020 (the "Initial Merger Agreement") by and among the Company, StemoniX and CGI Acquisition, Inc., a Minnesota corporation and wholly-owned subsidiary of the Company ("Merger Sub"), as amended by Amendment No. 1 thereto made and entered into as of February 8, 2021 (the "First Amendment") and Amendment No. 2 thereto made and entered into as of February 26, 2021 (the "Second Amendment") (the Initial Merger Agreement, as amended by the First Amendment and Second Amendment, the "Merger Agreement"), pursuant to which Merger Sub merged with and into StemoniX, with StemoniX surviving the Merger as a wholly-owned subsidiary of the Company.

The Merger was accounted for as a reverse acquisition with StemoniX being the accounting acquirer of CGI using the acquisition method of accounting. Under acquisition accounting, the assets and liabilities (including executory contracts, commitments and other obligations) of CGI, as of March 30, 2021, the closing date of the Merger, were recorded at their respective fair values and added to those of StemoniX. Any excess of purchase price consideration over the fair values of the identifiable net assets is recorded as goodwill. The total consideration paid by StemoniX in the Merger amounted to $59.9 million, which represents the fair value of CGI's 2,201,437 shares of Common Stock or $50.74 million, 431,537 Common Stock warrants or $9.04 million and 11,181 Common Stock options outstanding on the closing date of the Merger with a fair value of $139 thousand. In addition, at the effective time of the Merger, existing StemoniX shareholders received an additional 160,942 incremental shares in accordance with the conversion ratio set forth in the Merger Agreement.

As the Merger was consummated at the close of business on March 30, 2021, the Company's consolidated statement of operations for the year ended December 31, 2021 includes nine months and one day of operations associated with the historical CGI business.

Business Disposals - Discontinuing Operations

Prior to December 31, 2022, the Company owned and operated the *vivo*Pharm Pty Ltd ("*vivo*Pharm") business which it acquired in 2017. In December 2021, the Company's Board of Directors approved the engagement of an investment banker to seek to sell the *vivo*Pharm business to allow the Company to focus on the development of neurological developmental and degenerative disease therapeutics. As of December 31, 2021, the Company commenced accounting for *vivo*Pharm as discontinuing operations. For further information, see section entitled "Discontinuing Operations" later in this Part I, and Note 3, Discontinuing Operations, to the Company's Consolidated Financial Statements included in Part II. Item 8 herein.

On November 2, 2022, the Company entered into an Equity Purchase Agreement (the "Purchase Agreement") by and among the Company, Reaction Biology Corporation ("Reaction") and *vivo*Pharm, pursuant to which the Company sold the U.S. operations of its subsidiary, *vivo*Pharm to Reaction, in exchange for approximately $5.8 million in cash. Including final customary adjustments for working capital, closing cash, indebtedness and transaction expenses, the Company expects net proceeds from the Reaction Transaction to be approximately $4.8 million. In addition, the Company incurred $0.4 million in exit costs associated with the Reaction Transaction.

On December 30, 2022, *vivo*Pharm, entered into a Share Purchase Agreement (the "Share Agreement") with Sabine Brandt as trustee for the Brandt Family Trust ("Buyer"), pursuant to which *vivo*Pharm sold the entirety of the Company's remaining *vivo*Pharm business for early discovery services, represented by 100% of the outstanding shares of (i) of RDDT a *vivo*Pharm Company Pty Ltd; and (ii) *vivo*Pharm Europe Ltd, to Buyer in exchange for a nominal cash amount, subject to adjustments for closing cash and accounts payable, on and subject to the terms and conditions set forth therein (the "Second Transaction"). The Second Transaction resulted in the Company delivering target closing cash as part of the sold entities of approximately $827 thousand and the assumption by Buyer of liabilities of the sold entities aggregating to approximately $2.0 million. The Second Transaction was consummated effective December 31, 2022.

To complete the disposition of the Company's former *vivo*Pharm business and to resolve certain issues that had arisen with the Buyer, on March 13, 2023, the Company sold *vivo*Pharm to the Buyer for a nominal sum. As part of the sale of *vivo*Pharm to Buyer, the Company provided that *vivo*Pharm had cash of at least $200 thousand and the Company assumed certain specific *vivo*Pharm liabilities, principally liabilities directly associated with the proposed Phase 2 Donepezil clinical trial in Australia (which the Company has placed on hold as it evaluates its strategic alternatives) and certain *vivo*Pharm tax liabilities through the transaction's closing. The transaction was consummated effective March 13, 2023.

Management Changes

On January 31, 2023, John A. Roberts and Robert T. Fremeau, Jr., agreed in principle that Mr. Roberts and Dr. Fremeau would step down as President and Chief Executive Officer and Chief Scientific Officer, respectively, of the Company, effective as of February 3, 2023, and pursuant to their employment agreements, would be deemed terminated as of that date by the Company without cause for purposes of determining severance thereunder. Such agreement was not the result of any disagreement Mr. Roberts or Dr. Fremeau had with the Company on any matters relating to the Company's operations, policies or practices. Mr. Roberts will remain a member of the Board of Directors of the Company. Andrew D. C. LaFrence, the Company's Chief Financial Officer, assumed the role of President and Chief Executive Officer following Mr. Roberts' departure. Mr. LaFrence became Chief Financial Officer upon the Company's merger with StemoniX, Inc. on March 30, 2021, pursuant to the terms of an employment agreement, dated March 30, 2021, which will remain in effect.

Revenue from Continuing Operations

The Company's primary revenue sources are microOrgan plate product sales and the performance of preclinical drug testing services using our microOrgan technology, referred to as Discovery as a Service, or DaaS. In December 2021, the Company announced its plan to focus its resources on internal drug discovery development programs and wind down substantially all customer revenue generation. The Company expects nominal sales in the first quarter of 2023. For the years ended December 31, 2022 and 2021, 47% and 21% of revenue, respectively, was generated from customers located outside of the United States. During the years ended December 31, 2022 and 2021, four and three customers accounted for approximately 77% and 47%, respectively, of the consolidated revenue from continuing operations.

Cost of Goods from Continuing Operations

The Company separately reports cost of goods for product sales and service revenue. Product revenue costs include labor and product costs such as labware, plates and reagents required to develop iPSC's into microOrgans as well as overhead, facility and equipment costs at the Company's Maple Grove, Minnesota facility. As the facility was designed to accommodate the Company's long-term growth, it has historically operated at less than 25% of capacity. The Company converted its Maple Grove facility to a research and development facility in 2022 to focus its resources on internal drug discovery development programs. Cost of goods for service revenue includes internal labor, materials and allocated overhead costs to perform services for DaaS projects.

Operating Expenses from Continuing Operations

The Company classifies its operating expenses into three categories: research and development, selling, general and administrative as well as merger related costs. Operating expenses principally consist of personnel costs, including non-cash stock-based compensation, outside services, laboratory consumables, rent, overhead, development costs, and marketing program costs, legal and accounting fees.

Research and Development Expenses. Research and development expenses reflect the personnel related expenses, overhead and lab consumable costs to develop its microOrgan technology at its La Jolla, California facility as well as development activities undertaken at the Maple Grove, Minnesota facility.

Selling, General and Administrative Expenses. Selling, general and administrative expenses consist principally of personnel-related expenses, professional fees, such as legal, accounting, occupancy costs and other general expenses as well as personnel and related overhead costs for its business development team and related support personnel, travel and entertainment expenses, other selling costs, and trade shows.

Merger Related Costs. Merger related costs are direct professional service and investor banker costs incurred by the Company in connection with the Merger.

Coronavirus (COVID-19) Pandemic. On March 11, 2020, the World Health Organization declared the novel strain of coronavirus ("COVID-19") a global pandemic and recommended containment and mitigation measures worldwide. Many of the Company's customers worldwide were impacted by COVID-19 and temporarily closed their facilities which impacted revenue in the first half of 2020. While the impact of the pandemic on our business has lessened in 2021, the global outbreak of COVID-19 continued in late 2021 with new variants and has impacted the way we operate our business, including remote working, including its impact on technology security risks and employee retention. The extent to which the COVID-19 pandemic may impact the Company's future business will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as, the duration of the outbreak, travel restrictions and social distancing in the U.S. and other countries, business closures or business disruptions, and the effectiveness of actions taken in the U.S. and other countries to contain and treat the disease.

The Company is actively monitoring the impact of the COVID-19 pandemic on its business, results of operations and financial condition. The full extent to which the COVID-19 pandemic will directly or indirectly impact the Company's business, results of operations and financial condition in the future is unknown at this time and will depend on future developments that are highly unpredictable.

Results of Operations

Years Ended December 31, 2022 and 2021

The following table sets forth certain information concerning the Company's results from continuing operations for the periods shown (in thousands):

	For the year ended December 31,		Change	
	2022	2021	$	%
Revenue:				
Service	$ 99	$ 665	$ (566)	(85)%
Product	567	483	84	17%
Total revenue	666	1,148	(482)	(42)%
Operating costs and expenses:				
Cost of goods sold - service	44	408	(364)	(89)%
Cost of goods sold - product	964	1,439	(475)	(33)%
Research and development	6,772	4,273	2,499	58%
Selling, general and administrative	8,798	8,424	374	4%
Merger related costs	-	2,310	(2,310)	(100)%
Total operating costs and expenses	16,578	16,854	(276)	(2)%
Loss from operations	(15,912)	(15,706)	(206)	1%
Other expense:				
Change in fair value of warrant liability	-	214	(214)	(100)%
Change in fair value of share settlement obligation derivative	-	(250)	250	(100)%
Loss on debt conversions	-	(2,518	2,518	(100)%
Other income, net	12	57	(45)	(79)%
Interest income (expense), net	93	(372)	465	(125)%
Total other income (expense), net	105	(2,869)	2,974	(104)%
Loss from continuing operations before income taxes	(15,807)	(18,575)	2,768	(15)%
Income tax expense (benefit)	-	-	-	-
Net loss from continuing operations	$ (15,807)	$ (18,575)	$ 2,768	(15)%

Revenue from Continuing Operations

Total revenue from continuing operations decreased 42%, or $482 thousand, to $666 thousand for the year ended December 31, 2022, from $1.1 million for the year ended December 31, 2021. The decrease in the current-year periods were the result of our planned decrease in revenue generating activities at our Maple Grove facility as we transitioned its operations to an internal research and development facility in 2022. Product revenue increased in 2022 as compared with 2021, primarily from increased shipping volumes and increased pricing.

Cost of Goods from Continuing Operations

Cost of goods sold - service aggregated $44 thousand and $408 thousand, respectively, for the years ended December 31, 2022 and 2021, resulting in a cost of goods sold of 44.4% and 61.4%, respectively, of service revenue. The 2022 period was favorably impacted by a higher margin project and the 2021 period was negatively impacted by incremental costs incurred to achieve contract deliverables.

Cost of goods sold - product aggregated $964 thousand and $1.4 million for the years ended December 31, 2022 and 2021, respectively, resulting in a gross margin deficit of $397 thousand and $956 thousand, respectively, resulting from StemoniX's excess manufacturing capacity at its Maple Grove facility. The decrease in cost of goods sold margin deficit in 2022 as compared with 2021 was the result of increased revenue, a decrease in scrap materials and our focus on transforming our Maple Grove location to a research and development facility in 2022.

Operating Expenses from Continuing Operations

Research and Development Expenses. Research and development expenses from continuing operations increased 58%, or $2.5 million, to $6.8 million for the year ended December 31, 2022, from $4.3 million for the year ended December 31, 2021. This increase is primarily due to transforming our Maple Grove location to a research and development facility in 2022 which included a $1.2 million increase in payroll-related expenses, $553 thousand increase in research and development activities, $448 thousand reserve for manufacturing inventory repurposed as research and development expense and $223 thousand related to moving to a new facility in California in order to reduce the annual lease expense in that location.

Selling, General and Administrative Expenses. Selling, general and administrative expenses from continuing operations increased 4%, or $374 thousand, to $8.8 million for the year ended December 31, 2022, from $8.4 million for the year ended December 31, 2021. The 2021 period reflects the Company as a privately held company during the first quarter whereas the 2022 period reflects the Company as a publicly held company. The decrease is primarily due to transforming our Maple Grove location to a research and development facility in 2022 which included a $1.2 million increase in payroll-related expenses, offset by a $793 thousand increase in employee compensation. The 2022 period also includes one-time severance benefits for two former employees of $437 thousand. The Company incurred $467 thousand of additional insurance expense in 2022 as compared with 2021 largely due to public-company related insurance premiums.

Merger Related Costs. Merger related costs for the year ended December 31, 2021 were $2.3 million. There were no merger related costs for the year ended December 31, 2022.

Change in Fair Value of Warrant Liability

The Company issued a warrant with multiple settlement terms in the first quarter of 2021 and as a result, this warrant was classified as liability. Upon the close of the Merger, the warrant's settlement terms were finalized resulting in a final mark-to-market adjustment resulting in a non-cash gain of $214 thousand during the year ended December 31, 2021.

Change in Fair Value of Share Settlement Obligation Derivative

The Company recorded $250 thousand mark-to-market losses during the year ended December 31, 2021 for an embedded compound derivative from the 2020 Convertible Notes. Upon the close of the Merger the 2020 Convertible Notes were converted to equity.

Loss on Debt Conversion

The year ended December 31, 2021 included a $2.5 million loss on the conversion of the 2020 Convertible Notes to equity upon the closing of the Merger.

Interest Expense, Net

Net interest expense from continuing operations decreased by $465 thousand, or 125%, to $93 thousand interest income during the year ended December 31, 2022, from $372 thousand interest expense during the year ended December 31, 2021. Total other expense in 2021 consisted of a $250 thousand mark-to-market loss for an embedded compound derivative from the 2020 Convertible Notes, $2.5 million loss on the conversion of these notes to equity upon the closing of the Merger, a $214 thousand mark to market warrant liability gain, and interest expense of $368 thousand primarily related to the 2020 Convertible Notes.

Discontinuing Operations

In connection with the Merger, the Company was deemed to be the accounting acquiror of CGI, which included the *vivo*Pharm business on March 30, 2021. Therefore, upon classification as discontinuing operations in the fourth quarter of 2021, the *vivo*Pharm business is reflected in discontinued operations for nine months and one day in the year ended December 31, 2021 (the "Merger Impact").

The *vivo*Pharm business generated $6.4 million in revenue for 2022, an increase of $2.4 million, or 60% from $4.0 million in 2021 due to the Merger Impact and increased revenue from two customer contracts.

The *vivo*Pharm business incurred a $6.9 million net loss in 2022, a decrease of $15.4 million, or 69% from a $22.3 million net loss in 2021. The 2022 net loss includes an operating loss of $1.4 million, an impairment charge for goodwill and intangible assets of $5.4 million, which was the result of changes in market valuations for contract research organizations during 2022 which impacted the Company's valuation of the *vivo*Pharm business and a $106 thousand loss on the sale of the *vivo*Pharm businesses during the fourth quarter of 2022. The 2021 net loss includes an operating loss of $1.25 million and a goodwill impairment charge of $20.2 million.

Substantially all of *vivo*Pharm operations were sold in the fourth quarter of 2022.

Liquidity and Capital Resources

Sources and Uses of Liquidity

The Company has financed its operations through CGI cash balances on hand on the Merger date, product and services revenues, the sale of the *vivo*Pharm business and the sale of common stock under its at-the-market financing vehicle. Prior to the Merger, the Company's operating activities have been primarily funded with proceeds from the sale of convertible notes and preferred stock securities.

The Company's Board of Directors (the "Board"), after an assessment of the status of the Company's efforts to seek strategic alternatives and the Company's then current cash position, approved a plan on January 31, 2023 to preserve the Company's cash to be able to continue to pursue a satisfactory strategic alternative for the purpose of maximizing the value of the Company's business while also having sufficient cash to adequately fund an orderly wind down of the Company's operations (the "Cash Preservation Plan") in the event it is unable to secure a satisfactory strategic alternative. As part of the Cash Preservation Plan, the Company implemented a reduction in force, resulting in the retention of a core group of employees required for one or more potential strategic transactions and/or to execute an orderly wind down of the Company if required. The Company estimates that it will incur approximately $1.4 million for retention, severance and other employee termination-related costs in the first and second quarters of 2023. The Company has put on hold its pending efforts with respect to its current preclinical and clinical programs.

The Company is expected to generate minimal revenue from continuing operations as we have substantially ceased the Maple Grove facility's revenue producing operations to support internal drug discovery programs. The Company had cash and cash equivalents of $10.0 million as of December 31, 2022, an accumulated deficit of $101.5 million, cash outflows from continuing operations of $12.8 million for the year then ended 2022, and a net loss from continuing operations of $15.8 million. Based on our current operating plan, we are attempting to find strategic partners to acquire our assets, including our public company as a reverse merger candidate. There are no assurances that we will be able to raise cash in these transactions or find a reverse merger candidate and we may therefore need to complete an orderly winddown of the Company's operations or, if sufficient funds are not available, file for bankruptcy. Therefore, we believe we do not have sufficient cash and cash equivalents on hand to support current operations for the twelve months following the filing of this Annual Report which raises substantial doubt about our ability to continue as a going concern.

Financing Arrangements

On March 28, 2022, the Company entered into a purchase agreement, or Purchase Agreement, with Lincoln Park Capital Fund, LLC ("Lincoln Park"), which, subject to the terms and conditions, provides that the Company has the right to sell to Lincoln Park and Lincoln Park is obligated to purchase up to $15.0 million of its common shares.

On April 8, 2022, the Company entered into an Equity Distribution Agreement with Canaccord Genuity LLC (the "Canaccord"), pursuant to which the Company may issue and sell, from time to time, shares of its common stock having an aggregate offering price of up to $20,000,000, depending on market demand, with Canaccord acting as an agent for sales.

In 2022 the Company raised $61 thousand from at-the-market facility and in January 2023 raised an additional $458 thousand under that facility.

On March 23, 2023, the Company terminated the arrangements with both Lincoln Park and Canaccord.

The Company's forecast of the period of time through which its current financial resources will be adequate to support its operations and its expected operating expenses are forward-looking statements and involve risks and uncertainties. Actual results could vary materially and negatively as a result of a number of factors, including:

- the Company's ability to consummate any strategic transaction, whether by acquisition, sale of any part of its business, or otherwise, and effectively operate its business during any such transaction process;
- The time needed to consummate a strategic transaction if a counterparty is found;
- the Company's ability to execute on its current business plans while exploring strategic alternatives;
- the Company's need for significant additional capital and the Company's ability to satisfy its capital needs;
- the Company's potential product liability or intellectual property infringement claims;
- the Company's ability to maintain or protect the validity of its patents and other intellectual property;
- the Company's dependency on third-party manufacturers to supply it with instruments and specialized supplies;
- the Company's ability to adapt its business for future developments in light of the global outbreak of COVID-19, which continues to rapidly evolve;
- the Company's dependency on the intellectual property licensed to the Company or possessed by third parties; and
- the Company's ability to retain key talent.

Tax Contingency

In August 2022, in connection with efforts to sell its *vivo*Pharm subsidiary, the Company determined that certain historical vivoPharm tax returns either had not been filed or were incorrectly filed with the U.S. Internal Revenue Service ("IRS"). As a result of this finding, the Company determined that it is more-likely-than not that the tax exposure is not significant to the consolidated financial statements taken as a whole. This conclusion is based on the specific facts related to this matter and how we believe the IRS will treat these facts. Corrective tax returns were filed with the IRS in September 2022. In the event the IRS does not accept our position, the Company's tax liability could aggregate up to $2.8 million plus interest and penalties.

Cash Flows from Continuing Operations

The Company's net cash flow from operating, investing and financing activities from continuing operations for the periods below were as follows (in thousands):

	Year Ended December 31,	
	2022	2021
Cash (used in) provided by continuing operations:		
Operating activities	$ (12,888)	$ (16,488)
Investing activities	(617)	29,678
Financing activities	(113)	7,222
Net (decrease) increase in cash and cash equivalents from continuing operations	$ (13,618)	$ 20,412

The Company had cash and cash equivalents of $10.0 million and $20.6 million as of December 31, 2022 and 2021, respectively.

Cash Used in Operating Activities from Continuing Operations

Net cash used in operating activities from continuing operations was $12.9 million for the year ended December 31, 2022, consisting of a net loss of $15.8 million, decreased for net non-cash adjustments of $2.0 million and additional cash provided by operating assets and liabilities items of $891 thousand, largely from a reduction of inventory of $422 thousand as we transitioned the Maple Grove location to a research and development facility as well as an increase in accrued compensation and employee benefits.

Net cash used in operating activities from continuing operations was $16.5 million for the year ended December 31, 2021, consisting of a net loss from continuing operations of $18.6 million, decreased for net non-cash adjustments of $4.8 million. The non-cash adjustments include (i) stock-based compensation of $1.0 million, (ii) depreciation and amortization expense of $1.1 million, and (iii) a net loss related to the pre-merger StemoniX capital structure and related debt conversions of $2.7 million. Operating assets and liabilities used net cash of $2.7 million including Merger related costs in 2021. The net loss for the year ended December 31, 2021, also includes $2.3 million of Merger related costs.

Cash Provided by Investing Activities from Continuing Operations

Net cash used in investing activities from continuing operations was $617 thousand for the year ended December 31, 2022, related to investments in equipment and our new leased facility in California.

Net cash provided by investing activities from continuing operations was $29.7 million for the year ended December 31, 2021, principally from CGI cash balances at the close of the Merger of $30.2 million, offset by $535 thousand of equipment purchases.

Cash Provided by Financing Activities from Continuing Operations

Net cash used in financing activities from continuing operations was $113 thousand for the year ended December 31, 2022, primarily related to issuance costs related to the Lincoln Park Capital Fund LLC agreement partially offset by a new financing lease entered into in the third quarter.

Net cash provided by financing activities from continuing operations was $7.2 million for the year ended December 31, 2021 due to $5.0 million from the issuance of 2020 Convertible Notes and $1.8 million from the issuance of Series Preferred C shares.

Income Taxes

Over the past several years the Company has generated operating losses in all jurisdictions in which it may be subject to income taxes. As a result, the Company has accumulated significant net operating losses and other deferred tax assets. Because of the Company's history of losses and the uncertainty as to the realization of those deferred tax assets, a full valuation allowance has been recognized. The Company does not expect to report a benefit related to the deferred tax assets until it has a history of earnings, if ever, that would support the realization of its deferred tax assets.

Critical Accounting Policies and Significant Judgment and Estimates

The Company's management's discussion and analysis of financial condition and results of operations is based on its financial statements and condensed consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of the financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis, the Company evaluates its estimates based on historical experience and makes various assumptions, which management believes to be reasonable under the circumstances, and which form the basis for judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 4 to our December 31, 2022 and 2021 consolidated financial statements appearing elsewhere herein, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our financial statements.

Revenue recognition. Prior to the Merger, the Company's primary sources of revenue were product sales from the sale of microOrgan plates and the performance of preclinical drug testing services using the microOrgan technology. Subsequent to the Merger, the Company's revenue includes *vivo*Pharm's discovery services, consisting primarily of contract research services focused primarily on unique specialized studies to guide drug discovery. As noted herein, the *vivo*Pharm business has been classified as discontinuing operations as of December 31, 2021 and revenue earned from that business are included therein.

The Company recognizes revenue when it satisfies performance obligations under the terms of its contracts, and transfers control of the product to its customers in an amount that reflects the consideration the Company expects to receive from its customers in exchange for those products. This process involves identifying the customer contract, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when the performance obligations have been satisfied. A performance obligation is considered distinct from other obligations in a contract when it (a) provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and (b) is separately identified in the contract. The Company considers a performance obligation satisfied once it has transferred control of a product to a customer, which is generally upon shipment as the customer has the ability to direct the use and obtain the benefit of the product.

For product contracts, revenue is recognized at a point-in-time upon delivery to the customer. Product contracts with customers generally state the terms of the sale, including the quantity and price of each product purchased. Payment terms and conditions may vary by contract, although terms generally include a requirement of payment within a range of 30 to 90 days after the performance obligation has been satisfied. As a result, the contracts do not include a significant financing component. In addition, contacts typically do not contain variable consideration as the contracts include stated prices. The Company provides assurance-type warranties on all of its products, which are not separate performance obligations.

For service contracts, revenue is recognized over time and is generally defined pursuant to an enforceable right to payment for performance completed on service projects for which the Company's has no alternative use as customer furnished compounds are added to Company plates for testing. The Company does not obtain control of the customer furnished compounds as the Company does not have the ability to direct the use. Revenue is measured by the costs incurred to date relative to the estimated total direct costs to fulfill each contract (cost-to-cost method). Incurred costs represent work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Contract costs include labor, materials and overhead.

Some contracts offer price discounts after a specified volume has been purchased. The Company evaluates these options to determine whether they provide a material right to the customer, representing a separate performance obligation. If the option provides a material right to the customer, revenue is allocated to these rights and deferred; subsequently the revenue is recognized when those future goods or services are transferred, or when the option expires.

Contract assets primarily represent revenue earnings over time that are not yet billable based on the terms of the contracts. Contract liabilities consist of fees invoiced or paid by Vyant Bio's customers for which the associated performance obligations have not been satisfied and revenue has not been recognized based on Vyant Bio's revenue recognition criteria described above.

Given the Company's exit from selling products and services, which was substantially completed in 2022, the Company no longer considers revenue recognition as a critical accounting policy as of December 31, 2022.

Derivative Instruments. Prior to the closing of the Merger on March 30, 2021 the Company had a number of the financial instruments that were classified as derivatives. Upon the closing of the Merger, these instruments were converted to Company common stock at which time final mark-to-market adjustments were recorded by the Company.

The Company recognized all derivative instruments as either assets or liabilities in the consolidated balance sheets at their respective fair values. The Company evaluated its debt and equity issuances to determine if those contracts or embedded components of those contracts qualify as derivatives requiring separate recognition in its financial statements. The result of this accounting treatment is that the fair value of embedded derivatives was revalued as of each reporting date and recorded as a liability, and the change in fair value during the reporting period is recorded in other income (expense) in the statements of operations. In circumstances where the embedded conversion option in a convertible instrument was required to be bifurcated and there are also other embedded derivative instruments in the convertible instrument that are required to be bifurcated, the bifurcated derivative instruments were accounted for as a single, compound derivative instrument. The classification of derivative instruments, including whether such instruments should be recorded as liabilities or as equity, was reassessed at the end of each reporting period. Derivative instrument liabilities are classified in the consolidated balance sheets as current or non-current based on whether or not net-cash settlement of the derivative instrument is expected within twelve months of the balance sheet date.

The 2020 Convertible Notes contained a share settled redemption feature that required conversion to equity at the lesser of specified discounts from qualified financing price per share or the fair value of the common stock at the time of conversion. The discount changed based on the passage of time between issuance of the convertible note and the conversion event. This feature was considered a derivative that required bifurcation because it provide a specified premium to the holder of the note upon conversion. We measured the share-settlement derivative obligation at fair value based on significant inputs that are not observable in the market and require significant judgement. This instrument was settled upon the closing of the Merger.

The Company issued a warrant during the first quarter of 2021 that contained an indexation feature not indexed to the Company's stock resulting in this warrant to be accounted for as a derivative. As a result, this warrant was accounted for as a liability and marked to market from its issuance date in February 2021 through the Merger date, at which time the warrant's indexation features were finalized. The Company no longer deemed derivative instruments as a critical accounting policy as of December 31, 2022.

Business Combinations. Accounting for acquisitions requires extensive use of estimates and judgment to measure the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed. Additionally, we must determine whether an acquired entity is considered a business or a set of net assets because the excess of the purchase price over the fair value of net assets acquired can only be recognized as goodwill in a business combination. We accounted for the Merger with CGI as a business combination under the acquisition method of accounting. Consideration transferred to acquire CGI was measured at fair value. The determination of the $59.9 million purchase price consideration for the Merger was based on the closing stock price of the CGI common stock on the Merger date as well as the fair value of CGI common stock warrants and options outstanding on the Merger date using the Black Scholes Merton option pricing model. We allocated the purchase price to the acquired tangible and intangible assets and assumed liabilities of CGI based on their estimated fair values as of the acquisition date. Significant judgement is required to value and allocate the purchase price, especially for identified intangible assets. The allocation of the purchase price resulted in recognition of intangible assets related to tradename, customer relationships aggregating to $9.5 million and goodwill of $22.4 million. Given the completion of purchase accounting adjustments in Q1 2022 and there being no business combinations in 2022, the Company no longer deems business combinations to be a critical accounting policy as of December 31, 2022.

Valuation of Goodwill and Intangible Assets. Goodwill represents the excess of the purchase price over the fair value of net tangible and identified intangible assets acquired in a business combination. Goodwill is not amortized but is evaluated at least annually for impairment or when a change in facts and circumstances indicate that the fair value of the goodwill may be below the carrying value. The Company did not record Goodwill prior to the March 30, 2021 Merger. As a result of the Merger, the Company recorded $22.4 million of goodwill attributed to the *vivo*Pharm business.

As a described in Note 3 to the Company's consolidated financial statements, in the fourth quarter of 2021, the Company classified the *vivo*Pharm business as discontinuing operations and applied held for sale accounting. The Company valued the *vivo*Pharm business as of December 31, 2021 equally weighting public company revenue multiples as of December 31, 2021 and comparable transaction revenue multiples, which are classified as Level 3 measurements within the fair value hierarchy. The Company updated the valuation of the *vivo*Pharm business during the quarter ending March 31, 2022 based on equally weighting public company revenue multiples and comparable transaction revenue multiples, which resulted in a $4.5 million decrease to the fair value of *vivo*Pharm in the first quarter of 2022. The Company recognized an impairment charge of $4.3 million during the quarter ended March 31, 2022, which decreased *vivo*Pharm's net carrying value, net of estimated disposal costs from $9.2 million as of December 31, 2021 to $4.9 million. During the second quarter of 2022, the Company received two offers for mutually exclusive components of the *vivo*Pharm business and assessed the carrying value of each asset group using the estimated net sales proceeds based on these offers. As a result, the Company recorded a net impairment charge of $1.5 million during the second quarter of 2022. The Company recorded an impairment recovery of $388 thousand during the third quarter of 2022 based upon September 30, 2022 *vivo*Pharm net assets. The valuation of goodwill and intangible assets is no longer a critical accounting policy as of December 31, 2022.

Valuation of Long-Lived Assets. Long-lived assets, such as fixed assets subject to depreciation and right-of-use assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. If circumstances require a long-lived asset group be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by that asset group to its carrying amount. If the carrying amount of the long-lived asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds its fair value. As of December 31, 2022 and 2021 the Company determined that there were no indicators of impairment and did not recognize any fixed asset impairment in continuing operations.

Item 7A. Qualitative and Quantitative Disclosures about Market Risk

The Company has exposure to financial market risks, including changes in foreign currency exchange rates, and risk associated with how it invests its cash.

Foreign Exchange Risk

The Company conducted its business in foreign markets through its subsidiary in Australia (*vivo*Pharm Pty Ltd.). In the fourth quarter of 2022, the Company sold substantially all of the operations of *vivo*Pharm in two separate transactions. For the years ended December 31, 2022 and 2021, 0% and 21%, respectively, of the Company's continuing revenue was earned outside the United States and collected in local currency. The Company also commenced plans for a clinical trial in 2023 of which substantially all costs are denominated in Australian Dollars. This clinical trial has been placed on hold as part of the Company's cash preservation plan. As the *vivo*Pharm entities were sold in the fourth quarter of 2022, translation of foreign currencies is not material to the Company's consolidated financial position. Since the Merger, the Company was subject to risk for exchange rate fluctuations between such local currencies and the United States dollar and the subsequent translation of the Australia Dollar or Euro to United States dollars. The Company currently does not hedge currency risk.

Investment of Cash

The Company invests its cash primarily in cash and US government money market funds which are held by JPMorgan Chase Bank, N. A. and its affiliates. Because of the short-term nature of these investments, the Company does not believe it has material exposure due to market risk. The impact to the Company's financial position and results of operations from likely changes in interest rates is not material.

Item 8. Financial Statements and Supplementary Data

INDEX TO FINANCIAL STATEMENTS
Vyant Bio, Inc. and Subsidiaries

Consolidated Financial Report December 31, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Vyant Bio, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Vyant Bio, Inc. and subsidiaries (the "Company") as of December 31, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, temporary equity and common stockholders' equity (deficit), and cash flows, for each of the two years in the period ended December 31, 2022, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses and negative cash flows from operations since inception, has an accumulated deficit, has substantially ceased revenue generation, and is projecting insufficient liquidity to meet its obligations as they become due over the next twelve months, which raises 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 that might result from the outcome of this uncertainty.

Basis for Opinion

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

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

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

Critical Audit Matters

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

Long-lived Assets - Determination of Impairment Indicators - Refer to Notes 4, 6 and 7 to the financial statements

Critical Audit Matter Description

The Company's evaluation of long-lived assets for impairment involves an initial assessment of each asset group to determine whether events or changes in circumstances exist that may indicate that the carrying amounts of an asset group is no longer recoverable. Possible indications of impairment may include events or changes in circumstances affecting the recoverability of an asset group's carrying value. When events or changes in circumstances exist, the Company evaluates its assets for impairment by comparing undiscounted future cash flows expected to be generated over the life of each asset group to the respective carrying amount. If the carrying amount of an asset group exceeds the undiscounted future cash flows, an impairment is recognized.

The Company makes significant assumptions to evaluate an asset group for possible indications of impairment. Changes in these assumptions could have a significant impact on an asset group identified for further analysis. For the year ended December 31, 2022, no impairment loss has been recognized on its long-lived assets.

Given the Company's evaluation of possible indications of impairment of an asset group requires management to make significant assumptions, performing audit procedures to evaluate whether management appropriately identified events or changes in circumstances indicating that the carrying amounts of assets may not be recoverable required a high degree of auditor judgment and the use of fair value specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the assessment of long-lived asset groups for possible indications of impairment included the following, among others:

With the assistance of fair value specialists, we evaluated management's analysis of impairment indicators by:

- Performing inquiries of management regarding the process and assumptions used to identify potential indicators of impairment and evaluating the consistency of the assumptions with evidence obtained in other areas of the audit.

- Developing an independent expectation of impairment indicators (or lack thereof) and comparing such expectation to management's analysis.

- Testing long-lived asset groups for possible indications of impairment, including searching for adverse asset group-specific and/or market conditions.

- Inspecting minutes of the board of directors, the Company's public statements, operating plans, and industry data to identify evidence that may contradict management's assumptions.

/s/ DELOITTE & TOUCHE LLP

Minneapolis, Minnesota
March 31, 2023
We have served as the Company's auditor since 2020.

Vyant Bio, Inc.
Consolidated Balance Sheets
(Shares and USD in thousands)

	December 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 10,041	$ 20,608
Trade accounts and other receivables	323	434
Inventory	53	475
Prepaid expenses and other current assets	747	895
Assets of discontinuing operations - current	345	802
Total current assets	11,509	23,214
Non-current assets:		
Fixed assets, net	1,106	1,020
Operating lease right-of-use assets, net	1,542	673
Long-term prepaid expenses and other assets	1,048	1,221
Assets of discontinuing operations - non-current	-	11,508
Total non-current assets	3,696	14,422
Total Assets	$ 15,205	$ 37,636
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 655	$ 740
Accrued expenses	1,154	764
Deferred revenue	72	74
Obligations under operating leases, current portion	313	174
Obligation under finance lease, current portion	252	157
Liabilities of discontinuing operations - current	1,219	3,522
Total current liabilities	3,665	5,431
Obligations under operating leases, less current portion	1,301	516
Obligations under finance leases, less current portion	273	293
Long-term debt	57	57
Liabilities of discontinuing operations - non-current	-	49
Total Liabilities	5,296	6,346
Commitments and Contingencies (Note 16)		
Stockholders' Equity		
Preferred stock, authorized 9,764 shares $ 0.0001 par value, 0 shares issued and outstanding as of December 31, 2022 and 2021	-	-
Common stock, authorized 100,000 shares, $0.0001 par value, 5,922 and 5,798 shares issued and outstanding as of December 31, 2022 and 2021, respectively	1	1
Additional paid-in capital	111,443	110,176
Accumulated comprehensive loss	(32)	(74)
Accumulated deficit	(101,503)	(78,813)
Total Common Stockholders' Equity	9,909	31,290
Total Liabilities and Stockholders' Equity	$ 15,205	$ 37,636

See Notes to Consolidated Financial Statements.

Vyant Bio, Inc.
Consolidated Statements of Operations and Comprehensive Loss
(Shares and USD in thousands, except per share amounts)

	Years Ended December 31,	
	2022	2021
Revenue:		
Service	$ 99	$ 665
Product	567	483
Total revenue	666	1,148
Operating costs and expenses:		
Cost of goods sold - service	44	408
Cost of goods sold - product	964	1,439
Research and development	6,772	4,273
Selling, general and administrative	8,798	8,424
Merger related costs	-	2,310
Total operating costs and expenses	16,578	16,854
Loss from operations	(15,912)	(15,706)
Other income (expense):		
Change in fair value of warrant liability	-	214
Change in fair value of share-settlement obligation derivative	-	(250)
Loss on debt conversions	-	(2,518)
Other income	12	57
Interest expense, net	93	(372)
Total other income (expense)	105	(2,869)
Loss from continuing operations before income taxes	(15,807)	(18,575)
Income tax expense (benefit)	-	-
Loss from continuing operations	(15,807)	(18,575)
Discontinuing operations (net of ($21) and $0 tax (benefit) expense in 2022 and 2021, respectively)	(6,883)	(22,284)
Net loss	(22,690)	(40,859)
Cumulative translation adjustment	42	(74)
Comprehensive loss	$ (22,648)	$ (40,933)
Net loss per share attributed to common stock - basic and diluted:		
Net loss per share from continuing operations	$ (2.69)	$ (4.11)
Net loss per share from discontinuing operations	(1.18)	(4.92)
Net loss per share	$ (3.87)	$ (9.03)
Weighted average shares outstanding:		
Weighted average common shares outstanding - basic and diluted	5,868	4,525

See Notes to Consolidated Financial Statements.

Vyant Bio, Inc.
Consolidated Statements of Temporary Equity and Common Stockholders' Equity (Deficit)
(Shares and USD in thousands)
Years Ended December 31, 2022 and 2021

	Common Stock		Additional Paid In	Accumulated	Accumulated Comprehensive	Total Stockholders'
	Shares	Amount	Capital	Deficit	Loss	Equity
Balance as of January 1, 2022	5,798	$ 1	$ 110,176	$ (78,813)	$ (74)	$ 31,290
Stock-based compensation	-	-	1,455	-	-	1,455
Exercise of stock options	1	-	4	-	-	4
Vesting of restricted stock	2	-	-	-	-	-
Issuance of common stock, net of issuance costs of $250	121	-	(192)	-	-	(192)
Foreign currency translation adjustment	-	-	-	-	42	42
Net loss	-	-	-	(22,690)	-	(22,690)
Balance as of December 31, 2022	5,922	$ 1	$ 111,443	$ (101,503)	$ (32)	$ 9,909

	Series A Preferred Stock		Series B Preferred Stock		Series C Preferred Stock		Total Temporary	Common Stock		Additional Paid In	Accumulated	Accumulated Comprehensive	Total Common Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount	Equity	Shares	Amount	Capital	Deficit	Loss	(Deficit)
Balance as of January 1, 2021	4,612	$ 12,356	3,489	$ 16,651	-	$ -	$ 29,007	519	$ -	$ 1,514	$ (37,954)	$ -	$ (36,440)
Stock-based compensation	-	-	-	-	-	-	-	-	-	1,298	-	-	1,298
Exercise of stock options	-	-	-	-	-	-	-	1	-	41	-	-	41
Issuance of Series C Convertible Preferred shares, net of issuance costs of $214	-	-	-	-	567	1,786	1,786	-	-	-	-	-	-
Issuance of Common Stock for acquisition consideration	-	-	-	-	-	-	-	2,201	-	59,920	-	-	59,920
Issuance of Incremental shares to StemoniX shareholders upon Merger	-	-	-	-	-	-	-	161	-	-	-	-	-
Conversion of Preferred Stock to Common Stock upon Merger	(4,612)	(12,356)	(3,489)	(16,651)	(567)	(1,786)	(30,793)	2,239	1	30,792	-	-	30,793
Conversion of 2020 Notes to Common Stock upon Merger	-	-	-	-	-	-	-	668	-	16,190	-	-	16,190
Preferred stock warrant settled for Common Stock upon Merger	-	-	-	-	-	-	-	9	-	-	-	-	-
Warrant liability reclassified to equity upon Merger	-	-	-	-	-	-	-		-	421	-	-	421
Foreign currency translation adjustment	-	-	-	-	-	-	-		-	-		(74)	(74)
Net loss	-	-	-	-	-	-	-	-	-	-	(40,859)	-	(40,859)
Balance as of December 31, 2021	-	$ -	-	$ -	-	$ -	-	5,798	$ 1	$ 110,176	$ (78,813)	$ (74)	$ 31,290

See Notes to Consolidated Financial Statements.

Vyant Bio, Inc.
Condensed Consolidated Statements of Cash Flows
(USD in Thousands)

	Years Ended December 31,	
	2022	2021
Cash Flows from Operating Activities:		
Net loss	$ (22,690)	$ (40,859)
Net loss from discontinuing operations	6,883	22,284
Reconciliation of net loss to net cash used in operating activities, continuing operations:		
Stock-based compensation	1,186	1,003
Amortization of operating lease right-of-use assets	321	504
Depreciation and amortization expense	522	550
Change in fair value of share-settlement obligation derivative	-	250
Change in fair value of financial instruments	-	(210)
Accretion of debt discount	-	173
Loss on conversion of debt	-	2,518
Other	(1)	(14)
Changes in operating assets and liabilities, net of impacts of business combination:		
Trade accounts and other receivables	111	(77)
Inventory	422	(60)
Prepaid expense and other assets	321	(165)
Accounts payable	(85)	(1,146)
Obligations under operating leases	(265)	(499)
Accrued expenses and other liabilities	387	(740)
Net cash used in operating activities, continuing operations	(12,888)	(16,488)
Net cash used in operating activities, discontinuing operations	(793)	(505)
Net cash used in operating activities	(13,681)	(16,993)
Cash Flows from Investing Activities:		
Purchase of equipment	(617)	(535)
Proceeds from patent held for sale and equipment sales	-	50
Cash acquired from acquisition	-	30,163
Net cash (used in) provided by investing activities, continuing operations	(617)	29,678
Net cash provided by (used in) investing activities, discontinuing operations	3,880	(59)
Net cash provided by investing activities	3,263	29,619
Cash Flows from Financing Activities:		
Issuance of common stock, net of issuance costs	(188)	41
Issuance of Series C Convertible Preferred Stock, net of issuance costs	-	1,786
2020 Convertible Note proceeds, net of issuance costs	-	5,022
Principal payments on long-term debt	-	(82)
Proceeds from lease financing	266	492
Principal payments on obligations under financing leases	(191)	(37)
Net cash (used in) provided by financing activities, continuing operations	(113)	7,222
Net cash used in financing activities, discontinuing operations	(36)	(32)
Net cash (used in) provided by financing activities	(149)	7,190
Net (decrease) increase in cash and cash equivalents	(10,567)	19,816
Cash and cash equivalents, beginning of year	20,608	792
Cash and cash equivalents, end of year	$ 10,041	$ 20,608
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 34	$ 8
Cash paid for income taxes	8	-
Non-cash investing activities:		
Fair value of non-cash merger consideration	$ -	$ 59,920
Right-of-use assets obtained in exchange for new operating lease liabilities	1,189	83
Non-cash financing activities:		
Conversion of Convertible Preferred Stock to Common Stock upon Merger	$ -	30,793
Conversion of 2020 Convertible Notes and accrued interest to Common Stock upon Merger	-	16,190
Reclass warrant liability to equity upon Merger	-	421

See Notes to Consolidated Financial Statements.

Vyant Bio, Inc.
Notes to Consolidated Financial Statements

Note 1. Organization, Description of Business, Business Disposals, Offerings and Merger

Vyant Bio, Inc. (the "Company", "Vyant Bio", "VYNT" or "we"), is an innovative biotechnology company reinventing drug discovery for complex neurodevelopmental and neurodegenerative disorders. Our central nervous system ("CNS") drug discovery platform combines human-derived organoid models of brain disease, scaled biology, and machine learning. Our platform is designed to: 1) elucidate disease pathophysiology; 2) formulate key therapeutic hypotheses; 3) identify and validate drug targets, cellular assays, and biomarkers to guide candidate molecule selection; and 4) guide clinical trial patient selection and trial design. Our current programs are focused on identifying repurposed and novel small molecule clinical candidates for rare CNS genetic disorders including Rett Syndrome ("Rett"), CDKL5 Deficiency Disorders ("CDD") and familial Parkinson's Disease ("PD"). The Company's management believes that drug discovery needs to progressively shift as the widely used preclinical models for predicting safe and effective drugs have under-performed, as evidenced by the time and cost of bringing novel drugs to market. As a result, Vyant Bio is focused on combining sophisticated data science capabilities with highly functional human cell derived disease models. We leverage our ability to identify validated targets and molecular-based biomarkers to screen and test thousands of small molecule compounds in human diseased 3D brain organoids in order to create a unique approach to assimilating biological data that supports decision making iteratively throughout the discovery phase of drug development to identify both novel and repurposed drug candidates.

As further described in Note 3, in December 2021, the Company's Board of Directors approved a plan to sell the *vivo*Pharm Pty Ltd ("*vivo*Pharm") business to focus the Company on the development of neurological developmental and degenerative disease therapeutics. In the fourth quarter of 2022, the Company sold substantially all of the operations of *vivo*Pharm in two separate transactions.

The Company is expected to generate minimal revenue from continuing operations as we have substantially ceased the Maple Grove facility's revenue producing operations to support internal drug discovery programs. The Company had cash and cash equivalents of $10.0 million as of December 31, 2022, an accumulated deficit of $101.5 million, cash outflows from continuing operations of $12.8 million for the year then ended 2022, and a net loss from continuing operations of $15.8 million. As further described in Note 17, on January 4, 2023, the Company announced that it had engaged LifeSci Capital as its financial advisor to assist in exploring a wide range of strategic alternatives focused on enhancing shareholder value which could include selling the Company, selling Company assets, or including our public company as a reverse merger candidate. The Company's Board of Directors (the "Board") approved a plan on January 31, 2023 to preserve the Company's cash to be able to continue to pursue a satisfactory strategic alternative for the purpose of maximizing the value of the Company's business while also having sufficient cash to adequately fund an orderly wind down of the Company's operations (the "Cash Preservation Plan") in the event it is unable to secure a satisfactory strategic alternative. On March 24, 2023 the Company terminated its (a) Equity Distribution Agreement, dated April 8, 2022, by and between the Company and Canaccord Genuity LLC, regarding the issue and sale, from time to time, of shares of the Company's common stock for an aggregate offering price of up to $20,000,000, and (b) Purchase Agreement, dated March 28, 2022, by and between the Company and Lincoln Park Capital Fund, LLC, regarding the issue and sale, from time to time, of shares of the Company's common stock for an aggregate offering price of up to $15,000,000.

Going Concern

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles applicable to a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business.

The Company has suffered recurring losses and negative cash flows from operations since inception, has an accumulated deficit, and is expected to generate minimal revenue from continuing operations as we have substantially ceased the Maple Grove facility's revenue producing operations to support internal drug discovery programs. The Company is projecting insufficient liquidity to meet its obligations as they become due over the next twelve months. The Company had cash and cash equivalents of $10.0 million as of December 31, 2022, an accumulated deficit of $101.5 million, cash outflows from continuing operations of $12.8 million for the year then ended 2022, and a net loss from continuing operations of $15.8 million. As further described in Note 17, on January 4, 2023, the Company announced that it had engaged LifeSci Capital as its financial advisor to assist in exploring a wide range of strategic alternatives focused on enhancing shareholder value which could include selling the Company, selling Company assets, or including our public company as a reverse merger candidate. The Company's Board of Directors (the "Board") approved a plan on January 31, 2023 to preserve the Company's cash to be able to continue to pursue a satisfactory strategic alternative for the purpose of maximizing the value of the Company's business while also having sufficient cash to adequately fund an orderly wind down of the Company's operations (the "Cash Preservation Plan") in the event it is unable to secure a satisfactory strategic alternative. On March 24, 2023 the Company terminated its (a) Equity Distribution Agreement, dated April 8, 2022, by and between the Company and Canaccord Genuity LLC, regarding the issue and sale, from time to time, of shares of the Company's common stock for an aggregate offering price of up to $20,000,000, and (b) Purchase Agreement, dated March 28, 2022, by and between the Company and Lincoln Park Capital Fund, LLC, regarding the issue and sale, from time to time, of shares of the Company's common stock for an aggregate offering price of up to $15,000,000. These conditions and events raise substantial doubt about the Company's ability to continue as a going concern.

In response to these conditions and based on our current operating plan, the Company plans to reduce expenses, slow cash flows, and evaluate strategic partners to acquire our assets, including our public company as a reverse merger candidate. There are no assurances that we will be able to raise cash in these transactions or find a reverse merger candidate and we may therefore need to complete an orderly winddown of the Company's operations or, if sufficient funds are not available, bankruptcy. These plans have not yet been finalized and are not within the Company's control, and therefore cannot be deemed probable. As a result, the Company has concluded that management's plans do not alleviate substantial doubt about the Company's ability to continue as a going concern.

The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

Dollar amounts in tables are stated in thousands of U.S. dollars.

Note 2. Cancer Genetics, Inc. Merger

The Company formerly known as Cancer Genetics, Inc. ("CGI"), StemoniX and CGI Acquisition, Inc. ("Merger Sub") entered into a merger agreement on August 21, 2020, which was amended on February 8, 2021 and February 26, 2021 (as amended, the "Merger Agreement"). Pursuant to the terms of the Merger Agreement, Merger Sub was merged (the "Merger") with and into StemoniX on March 30, 2021, with StemoniX surviving the Merger as a wholly owned subsidiary of the Company. For U.S. federal income tax purposes, the Merger qualified as a tax-free "reorganization".

Concurrent with the Merger closing, the Company changed its name to Vyant Bio, Inc. Under the terms of the Merger Agreement, upon consummation of the Merger, the Company issued (i) an aggregate of 3,595,508 shares of VYNT common stock, par value $0.0001 per share (the "Common Stock") to the holders of StemoniX capital stock (after giving effect to the conversion of all StemoniX preferred shares and StemoniX 2020 Convertible Notes) and StemoniX warrants (which does not include a certain warrant (the "Major Investor Warrant") issued to a certain StemoniX convertible note holder (the "Major Investor")), (ii) options to purchase an aggregate of 178,356 shares of Common Stock to the holders of StemoniX options with exercise prices ranging from $3.30 to $23.05 per share and a weighted average exercise price of $7.30 per share, and (iii) a warrant (the "Major Investor Warrant") to the Major Investor, expiring February 23, 2026 to purchase 28,778 shares of Common Stock at a price of $29.5295 per share in exchange for the Major Investor Warrant.

The Merger was accounted for as a reverse acquisition with StemoniX being the accounting acquirer of CGI using the acquisition method of accounting. Under acquisition accounting, the assets and liabilities (including executory contracts, commitments and other obligations) of CGI, as of March 30, 2021, the closing date of the Merger, were recorded at their respective fair values and added to those of StemoniX. Any excess of purchase price consideration over the fair values of the identifiable net assets is recorded as goodwill. The total consideration paid by StemoniX in the Merger amounted to $59.9 million, which represents the fair value of CGI's 2,201,437 shares of Common Stock or $50.74 million, 431,537 Common Stock warrants or $9.04 million and 11,181 Common Stock options outstanding on the closing date of the Merger with a fair value of $139 thousand. In addition, at the effective time of the Merger, existing StemoniX shareholders received an additional 160,942 incremental shares in accordance with the conversion ratio set forth in the Merger Agreement.

The Company incurred $2.3 million of costs associated with the Merger that have been reported on the consolidated statements of operations as Merger related costs for the year ended December 31, 2021.

The following details the allocation of the preliminary purchase price consideration recorded on March 30, 2021, the acquisition date, with adjustments recorded through the first quarter of 2022, the end of the purchase price allocation period.

	Preliminary	Adjustments	Final
Assets acquired:			
Cash and equivalents	$ 30,163	$ -	$ 30,163
Accounts receivable	705	-	705
Other current assets	806	227	1,033
Intangible assets	9,500	-	9,500
Fixed assets	416	(256)	160
Goodwill	22,164	216	22,380
Long-term prepaid expenses and other assets	1,381	-	1,381
Total assets acquired	$ 65,135	$ 187	$ 65,322
Liabilities assumed:			
Accounts payable and accrued expenses	$ 2,670	$ 437	$ 3,107
Current liabilities of discontinuing operations	588	(141)	447
Obligations under operating leases	198	-	198
Obligations under finance leases	106	-	106
Deferred revenue	1,293	(114)	1,179
Payroll and income taxes payable	360	5	365
Total liabilities assumed	$ 5,215	$ 187	$ 5,402
Net assets acquired	$ 59,920	$ -	$ 59,920

The Company substantially completed valuation analyses necessary to assess the fair values of the tangible and intangible assets acquired and liabilities assumed and the amount of goodwill to be recognized as of the acquisition date. Fair values were based on management's estimates and assumptions. The Company recognized intangible assets related to the Merger, which consist of the tradename valued at $1.5 million with an estimated useful life of ten years and customer relationships valued at $8.0 million with an estimated useful life of ten years. The value of the *vivo*Pharm tradename was determined using the relief from royalty method based on analysis of profitability and review of market royalty rates. The Company determined that a 1.0% royalty rate was appropriate given the business-to-business nature of the *vivo*Pharm operations. The value of the *vivo*Pharm customer relationships was determined using an excess earnings method based on projected discounted cash flows and historic customer data. Key assumptions in this analysis included an estimated 10% annual customer attrition rate based on historical *vivo*Pharm operations, a blended U.S. federal, state and Australian income tax rate of 27.1%, a present value factor of 8.5% as well as revenue, cost of revenue and operating expense assumptions regarding the future growth, operating expenses, including corporate overhead charges, and required capital investments.

These intangible assets are classified as Level 3 measurements within the fair value hierarchy.

The following presents the unaudited pro forma combined financial information as if the Merger had occurred as of January 1, 2021:

	Year ended December 31, 2021
Total revenue	$ 6,726
Net loss	(35,623)
Pro forma loss per common share,	(6.15)
Pro forma weighted average number of common shares basic and diluted	5,795,498

The pro forma combined results of operations are not necessarily indicative of the results of operations that actually would have occurred had the Merger been completed as of January 1, 2021, nor are they necessarily indicative of future consolidated results.

Note 3. Discontinuing Operations

In December 2021, the Company's Board of Directors approved a plan to sell the *vivo*Pharm Pty Ltd ("*vivo*Pharm") business to focus the Company on the development of neurological developmental and degenerative disease therapeutics. In December 2021, the Company engaged an investment bank to sell the *vivo*Pharm business which was substantially completed in the fourth quarter of 2022.

On November 2, 2022 the Company completed the sale of its principal *vivo*Pharm subsidiary, *vivo*Pharm LLC located in Hershey, Pennsylvania, to Reaction Biology Corporation for $5.5 million in an upfront cash payment, subject to customary adjustments for working capital, closing cash, indebtedness and transaction expenses. After these closing adjustments were reflected, $5.5 million was paid at closing and an additional $0.3 million was paid in February 2023. Vyant Bio received approximately $4.8 million in cash after transaction related expenses and income taxes, as well as incur $0.4 million in exit costs associated with this transaction. Exit costs associated with the *vivo*Pharm business were paid in January 2023. In connection with the sale of the *vivo*Pharm LLC business, the Company agreed to retain certain liabilities aggregating to $357 thousand.

On December 30, 2022, the Company entered into a Share Purchase Agreement (the "Agreement") with Sabine Brandt as trustee for the Brandt Family Trust ("Buyer"), pursuant to which *vivo*Pharm sold the entirety of the Company's remaining *vivo*Pharm business for early discovery services, represented by 100% of the outstanding shares of (i) of RDDT a *vivo*Pharm Company Pty Ltd; and (ii) *vivo*Pharm Europe Ltd, to Buyer in exchange for a nominal cash amount, subject to adjustments for closing cash and accounts payable, on and subject to the terms and conditions set forth therein. The sale resulted in the Company delivering target closing cash as part of the sold entities of approximately $827 thousand and the assumption by Buyer of liabilities of the sold entities aggregating to approximately $2.0 million. The Transaction was consummated effective December 31, 2022. The Agreement contains customary representations, warranties, covenants and indemnification provisions.

As further described in note 17, the Company sold the remainder of the *vivo*Pharm business in Australia on March 13, 2023.

In connection with the classification of the *vivo*Pharm business as held for sale in the fourth quarter of 2021, the Company completed a valuation of the net carrying value of this business and recorded a goodwill impairment charge of $20.2 million. In 2022, the Company recorded an additional impairment charges of $5.4 million consisting of the write-off of the remaining $2.2 million goodwill balance and reducing the cost basis of customer relationships and tradenames by $2.7 million and $0.5 million, respectively.

Also included in discontinuing operations are pre-Merger-related payables related to Cancer Genetics' sale of its BioPharma and Clinical businesses ("Pre-Merger discontinuing operations"). As of December 31, 2022 and 2021, $267 thousand and $409 thousand, respectively, of liabilities relating to these businesses are classified as other current liabilities - discontinuing operations on the Company's condensed consolidated balance sheets.
Results of discontinuing operations were as follows:

	Years ended December 31,	
	2022	**2021**
Revenue	$ 6,406	$ 3,978
Cost of goods sold	3,189	2,524
General and administrative	4,709	3,531
Impairment of goodwill and intangible assets	5,415	20,216
Total operating costs and expenses	$ 13,313	$ 26,271
Loss from discontinuing operations	$ (6,907)	$ (22,293)
Total other income	$ 3	$ 9
Loss from discontinuing operations before income taxes	$ (6,904)	$ (22,284)
Income tax expense (benefit)	(21)	-
Net loss from discontinuing operations	$ (6,883)	$ (22,284)

Asset and liabilities of discontinuing operations were as follows:

	December 31,	
	2022	2021
Accounts receivable	$ 11	$ 457
Due from Reaction Biology Corporation	334	
Other current assets	-	345
Assets of discontinuing operations - current	$ 345	$ 802
Fixed assets, net of accumulated depreciation	$ -	$ 163
Operating lease right-of-use assets	-	30
Patents and other intangible assets, net	-	8,787
Goodwill	-	2,164
Other assets	-	364
Assets of discontinuing operations - non-current	$ -	$ 11,508
Accounts payable	$ 47	$ 358
Due to RDDT a vivoPharm Company Pty Ltd	216	
Accrued expense	577	418
Obligation under operating lease, current	-	29
Obligation under finance lease, current	-	32
Deferred revenue	43	1,911
Taxes payable	69	365
Other current liabilities	267	409
Liabilities of discontinued operations - current	$ 1,219	$ 3,522
Obligations under operating leases, less current	$ -	$ 2
Obligations under finance leases, less current	-	47
Liabilities of discontinued operations -non- current	$ -	$ 49

There were no intangible assets as of December 31, 2022. Intangible assets consisted of the following as of December 31, 2021:

	2021
Intangible Assets:	
Customer relationships	$ 8,000
Trade name	1,500
	9,500
Less accumulated amortization	(713)
Intangible assets, net	$ 8,787

Amortization expense for intangible assets aggregated $713 thousand for the year ended December 31, 2021. There was no amortization expense for intangible assets recorded in 2022.

Goodwill arising from the Merger was solely attributed to the *vivo*Pharm business. The following is a roll forward of goodwill as of and for the year ended December 31, 2022 and 2021:

Beginning balance, January 1, 2021	$ -
Initial balance upon consummation of the Merger	22,164
Purchase price adjustments	216
Impairment charge	(20,216)
Ending balance, December 31, 2021	$ 2,164
Impairment charge	(2,164)
Ending balance, December 31, 2022	$ -

Note 4. Significant Accounting Policies

Basis of presentation: The Company prepares its financial statements on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Segment reporting: Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance. All of the Company's assets from continuing operations are maintained in the U.S. The Company views and manages its continuing operations as one segment. Per Note 2, the Merger on March 30, 2021, combined the StemoniX business with Vyant Bio and its *vivo*Pharm business. The Company completed its review of the ongoing strategy and reporting structure of its operations in the fourth quarter of 2021 resulting in the Company's Board of Directors approval to engage investment bankers to sell the *vivo*Pharm business in 2022. As a result of this strategic decision, the Company completed its analysis of segment and reporting unit accounting arising from the Merger, identified *vivo*Pharm as a reporting unit, and allocated all of the goodwill arising from the Merger to the *vivo*Pharm business' discontinuing operations. See Note 3 for further information regarding the *vivo*Pharm discontinuing operations.

Principles of consolidation: The accompanying consolidated financial statements include the accounts of Vyant Bio, Inc. and its wholly-owned subsidiaries. All significant intercompany account balances and transactions have been eliminated in consolidation.

Foreign currency: The Company translates the financial statements of its foreign subsidiaries, which have a functional currency in the respective country's local currency, to U.S. dollars using month-end exchange rates for assets and liabilities and average exchange rates for revenue, costs and expenses. Translation gains and losses are recorded in accumulated comprehensive loss as a component of stockholders' equity. For the years ended December 31, 2022 and 2021 there were foreign currency translation gains of $42 thousand and losses of $74 thousand, respectively, all related to the *vivo*Pharm business. Gains and losses resulting from foreign currency transactions that are denominated in currencies other than the entity's functional currency are included within discontinuing operations in the consolidated statements of operations.

Use of estimates: The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent 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. The Company's significant estimates include estimated transaction price, including variable consideration, of the Company's revenue contracts; the value of intangible assets arising from the Merger, the fair value of the net assets of the *vivo*Pharm business classified as discontinuing operations, the useful lives of fixed assets; the valuation of embedded derivatives; deferred tax assets, inventory, right-of-use (ROU) assets and lease liabilities, stock-based compensation, income tax uncertainties, other long-lived assets and other contingencies.

Risks and uncertainties: The Company operates in an industry that is subject to intense competition, government regulation and rapid technological change. The Company's operations are subject to significant risk and uncertainties including financial, operational, technological, regulatory, and other risks, including the potential risk of business failure.

Cash and cash equivalents: The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. The cash and cash equivalents balance as of December 31, 2022 and 2021 includes $8.6 million and $12.0 million, respectively, invested in a U.S. government money market fund.

Revenue recognition: The Company recognizes revenue when it satisfies performance obligations under the terms of its contracts, and transfers control of the product to its customers in an amount that reflects the consideration the Company expects to receive from its customers in exchange for those products. This process involves identifying the customer contract, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when the performance obligations have been satisfied. A performance obligation is considered distinct from other obligations in a contract when it (a) provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and (b) is separately identified in the contract. The Company considers a performance obligation satisfied once it has transferred control of a product to a customer, which is generally upon shipment as the customer has the ability to direct the use and obtain the benefit of the product.

The Company's primary sources of revenue are product sales from the sale of microOrgan® plates and the performance of preclinical drug testing services using the microOrgan technology. The Company does not act as an agent in any of its revenue arrangements.

For product contracts, revenue is recognized at a point-in-time upon delivery to the customer, which is generally deemed to occur upon shipment. Product contracts with customers generally state the terms of the sale, including the quantity and price of each product purchased. Payment terms and conditions may vary by contract, although terms generally include a requirement of payment within a range of 30 to 90 days after the performance obligation has been satisfied. As a result, the contracts do not include a significant financing component. In addition, contacts typically do not contain variable consideration as the contracts include stated prices. The Company provides assurance-type warranties on all of its products, which are not separate performance obligations.

For service contracts, revenue is recognized over time and is generally defined pursuant to an enforceable right to payment for performance completed on service projects for which the Company has no alternative use as customer furnished compounds are added to Company plates for testing. The Company does not obtain control of the customer furnished compounds as the Company does not have the ability to direct their use. Revenue is measured by the costs incurred to date relative to the estimated total direct costs to fulfill each contract (cost-to-cost method). Incurred costs represent work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Contract costs include labor, materials and overhead.

Contracts are often modified to account for changes in contract specifications and requirements. Contract modifications exist when the modification either creates new, or changes existing, enforceable rights and obligations. Generally, when contract modifications create new performance obligations, the modification is considered to be a separate contract and revenue is recognized prospectively. When contract modifications change existing performance obligations, the impact on the existing transaction price and measure of progress for the performance obligation to which it relates is generally recognized as an adjustment to revenue (either as an increase in or a reduction of revenue) on a cumulative catch-up basis.

Contract assets primarily represent revenue earnings over time that are not yet billable based on the terms of the contracts. Contract liabilities (i.e., deferred revenue) consist of fees invoiced or paid by the Company's customers for which the associated performance obligations have not been satisfied and revenue has not been recognized based on the Company's revenue recognition criteria described above.

The Company records all amounts collected for shipping as revenue. Amounts collected from customers for sales tax are recorded in sales net of amounts paid to related taxing authorities.

The Company may include subcontractor or third-party vendors in certain integrated services arrangements. In these arrangements, revenue from sales of third-party vendor services is generally recorded gross as revenue and cost of goods sold - service, as the Company is the principal for the transaction. When the Company is acting as an agent between a customer and the vendor services, the Company does not record revenue and vendor costs are recorded net within cost of goods sold - service. To determine whether the Company is an agent or principal, the Company considers whether it obtains control of services before they are transferred to the customer. In making this evaluation, several factors are considered, most notably whether the Company has primary responsibility for fulfillment to the client, as well as fiscal risk and pricing discretion.

There were no contract assets from continuing operations as of December 31, 2022. There were contract assets from continuing operations of $70 thousand as of December 31, 2021. Contract liabilities from continuing operations related to unfulfilled performance obligations were $72 thousand and $74 thousand as of December 31, 2022 and 2021, respectively, and are recorded in deferred revenue. There were no contract assets classified within discontinuing operations as of December 31, 2022. Contract assets classified within discontinuing operations aggregated $75 thousand as of December 31, 2021. Contract liabilities classified within discontinuing operations aggregated $43 thousand and $1.9 million as of December 31, 2022 and 2021, respectively.

Trade accounts receivable: Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The Company records an allowance for doubtful accounts for estimated losses inherent in its accounts receivable portfolio. In establishing the required allowance, management considers historical losses adjusted to consider current market conditions and the Company's customers' financial condition, the amount of receivables in dispute, and the current receivables aging and current payment patterns. The Company reviews its allowance for doubtful accounts monthly. No allowances were recorded as of December 31, 2022 or 2021. Write-offs for the years ended December 31, 2022 and 2021 were not significant. The Company does not have any off-balance-sheet credit exposure related to its customers.

Other receivables: For the years ended December 31, 2022 and 2021, the Company elected to use federal research and development (R&D) tax credit carryforwards to offset federal payroll taxes paid. The Company recorded R&D tax credit receivables of $252 thousand and $100 thousand as of December 31, 2022 and 2021, respectively. For the years ended December 31, 2022 and 2021, the Company recognized $252 thousand and $205 thousand, respectively, of R&D tax credits as a reduction in payroll tax expenses within continuing operations.

Concentration of credit risk: Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and trade receivables. The Company places cash and cash equivalents in various financial institutions with high credit rating and limits the amount of credit exposure to any one financial institution. Trade receivables are primarily from clients in the pharmaceutical and biotechnology industries, as well as academic and government institutions. Concentrations of credit risk with respect to trade receivables, which are typically unsecured, are limited due to the wide variety of customers using the Company's products and services as well as their dispersion across many geographic areas. As of December 31, 2022 and 2021, one and four customers, respectively, represented 10% or more of the Company's total trade accounts receivable, and in the aggregate, these customers represented 100%, or $ 71 thousand, and 78%, or $262 thousand, respectively, of the Company's total trade accounts receivable.

Inventory: Inventory is stated at the lower of cost or net realizable value, with cost being determined on a first-in first-out basis. Cost includes materials, labor and manufacturing overhead related to the purchase and production of inventory. Costs associated with the underutilization of capacity are expensed to Cost of goods sold - product as incurred. Inventory is adjusted for excess and obsolete amounts. Evaluation of excess inventory includes items such as inventory levels, anticipated usage, and customer demand, among others.

Prepaid expenses and other assets: In connection with the Merger, a number of Director and Officer insurance contracts were in place, including tail policies accounted for as acquired assets in connection with the Merger. Aggregate premiums of $2.7 million are being expensed over the term of each respective policy. As of December 31, 2022 and 2021, $797 thousand and $1.0 million, respectively, has been classified in the consolidated balance sheet as non-current prepaid assets related to amounts that will be expensed more than one year after year end.

Deferred revenue: Payments received in advance of services rendered are recorded as deferred revenue and are subsequently recognized as revenue in the period in which the services are performed.

Fixed assets: The Company's purchased fixed assets are stated at cost. Fixed assets under finance leases are stated at the present value of minimum lease payments. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets. The estimated useful life of equipment is five years. Leasehold improvements are depreciated over the shorter of useful life or the lease term. Repair and maintenance costs are expensed as incurred.

Long-lived assets, such as fixed assets subject to depreciation, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. If circumstances require a long-lived asset group be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by that asset group to its carrying amount. If the carrying amount of the long-lived asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds its fair value. As of December 31, 2022 and 2021 the Company determined that there were no indicators of impairment and did not recognize any fixed asset impairment use in continuing operations.

Goodwill: Goodwill represents the excess of the purchase price over the fair value of net tangible and identified intangible assets acquired in a business combination. Goodwill is not amortized but is evaluated at least annually for impairment or when a change in facts and circumstances indicate that the fair value of the goodwill may be below the carrying value. The Company did not record Goodwill prior to the March 30, 2021 Merger. As a result of the Merger, the Company recorded $22.4 million of goodwill attributed to the *vivo*Pharm business. As a described in Note 3, the Company classified the *vivo*Pharm business as a held for sale asset in the fourth quarter of 2021 and concurrently evaluated the carrying value of this asset group to its estimated fair value resulting in the recording of a $20.2 million goodwill impairment charge in 2021. An additional $2.2 million goodwill impairment charge was recorded in 2022.

Convertible notes: The Company accounts for convertible notes using an amortized cost model. Debt issuance costs and the initial fair value of bifurcated compound derivatives reduce the initial carrying amount of the convertible notes. The carrying value is accreted to the stated principal amount at contractual maturity using the effective-interest method with a corresponding charge to interest expense. Debt discounts are presented on the consolidated balance sheets as a direct deduction from the carrying amount of that related debt.

Fair value option: The Company has the irrevocable option to report most financial assets and financial liabilities at fair value on an instrument-by-instrument basis, with changes in fair value reported in earnings. The Company elected to account for the convertible note issued to the Major Investor in February 2021 under the fair value option. See Note 11 to the consolidated financial statements.

Warrants: Except as noted in the next paragraph, the Company accounts for its preferred stock warrants issued to non-employees in equity as issuance costs, as the warrants were issued as vested share-based payment compensation to non-employees.

The Company issued a warrant during first quarter of 2021 that contained an indexation feature not indexed to the Company's stock resulting in this warrant being accounted for as a derivative. Derivative warrants are recorded as liabilities in the accompanying consolidated balance sheets. These common stock purchase warrants do not trade in an active securities market, and as such, the Company estimated the fair value of these warrants using the Black-Scholes valuation pricing model with the assumptions as follows: the risk-free interest rate for periods within the contractual life of the warrant is based on the U.S. Treasury yield curve. The expected life of the warrants is based upon the contractual life of the warrants. The Company uses the historical volatility of its common stock and the closing price of its shares on the NASDAQ Capital Market. As further described in Note 10 to the consolidated financial statements, as a result of the Merger, the terms of this warrant were finalized through the conversion to a Vyant Bio warrant resulting in the Vyant Bio warrant being equity classified.

Derivative instruments: The Company recognizes all derivative instruments as either assets or liabilities in the consolidated balance sheets at their respective fair values. The Company evaluates its debt and equity issuances to determine if those contracts or embedded components of those contracts qualify as derivatives requiring separate recognition in the Company's financial statements. The result of this accounting treatment is that the fair value of the embedded derivative is revalued as of each reporting date and recorded as a liability, and the change in fair value during the reporting period is recorded in other income (expense) in the consolidated statements of operations. In circumstances where the embedded conversion option in a convertible instrument is required to be bifurcated and there are also other embedded derivative instruments in the convertible instrument that are required to be bifurcated, the bifurcated derivative instruments are accounted for as a single, compound derivative instrument. The classification of derivative instruments, including whether such instruments should be recorded as liabilities or as equity, is reassessed at the end of each reporting period. Derivative instrument liabilities are classified in the consolidated balance sheets as current or non-current based on whether or not net-cash settlement of the derivative instrument is expected within twelve months of the consolidated balance sheet date.

Income taxes: Income taxes are accounted for under the asset and liability method. 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 and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. A valuation allowance is provided when it is more likely than not that some portion of the deferred tax asset will not be realized. 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.

The Company recognizes the effect of income tax positions only if those positions are more likely than not to be sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. The Company records interest related to unrecognized tax benefits and penalties in income tax expense.

The Company elects to present deferred taxes and the effect of unrecognized tax benefits associated with the held for sale assets and liabilities as part of the assets (or liabilities) held for sale. The deferred taxes primarily relate to net operating loss carryforwards in US and foreign jurisdictions that are classified as held for sale. Due to a valuation allowance recorded against the deferred tax assets, the net impact of deferred tax assets included in the held for sale assets and liabilities is $0.

Leases: The Company leases office space, laboratory facilities, and equipment. The Company determines if an arrangement is or contains a lease at contract inception and recognizes a right of use ("ROU") asset and a lease liability at the lease commencement date.

For operating leases, the lease liability is initially and subsequently measured at the present value of the unpaid lease payments at the lease commencement date. For finance leases, the lease liability is initially measured in the same manner and date as for operating leases and is subsequently measured at amortized cost using the effective-interest method. The Company has elected the practical expedient to account for lease and non-lease components as a single lease component. Therefore, the lease payments used to measure the lease liability includes all of the fixed consideration in the contract.

Key estimates and judgments include how the Company determines (1) the discount rate it uses to discount the unpaid lease payments to present value, (2) lease term and (3) lease payments. The Company discounts its unpaid lease payments using the interest rate implicit in the lease or, if that rate cannot be readily determined, its incremental borrowing rate. Generally, the Company cannot determine the interest rate implicit in the lease because it does not have access to the lessor's estimated residual value or the amount of the lessor's deferred initial direct costs. Therefore, the Company generally uses its incremental borrowing rate as the discount rate for the lease. The Company's incremental borrowing rate for a lease is the rate of interest it would have to pay on a collateralized basis to borrow an amount equal to the lease payments under similar terms. Because the Company does not generally borrow on a collateralized basis, it uses the interest rate it pays on its non-collateralized borrowings as an input to deriving an appropriate incremental borrowing rate, adjusted for the lease payments, the lease term and the effect on that rate of designating specific collateral with a value equal to the unpaid lease payments for that lease.

The lease term for all the Company's leases includes the noncancellable period of the lease plus any additional periods covered by either a Company option to extend (or not to terminate) the lease that the Company is reasonably certain to exercise, or an option to extend (or not to terminate) the lease controlled by the lessor.

Intangible assets: Intangible assets consist of *vivo*Pharm's customer relationships and tradename that were acquired in the Merger, which were being amortized using the straight-line method over the estimated useful lives of the assets of ten years. These assets were included in long-term assets of discontinuing operations as of December 31, 2021. Therefore, the Company did not record any amortization expense in 2022 for these assets. As described in Note 3, the *vivo*Pharm business was sold in the fourth quarter of 2022, and there are no intangible assets remaining as of December 31, 2022. Amortization expense in discontinuing operations for these intangible assets aggregated $713 thousand for the year ended December 31, 2021.

Research and development: Research and development costs are expensed as incurred. Research and development costs primarily consist of personnel costs, including salaries and benefits, lab materials and supplies, and overhead allocation consisting of various support and facility related costs. Research and development costs were $6.8 million and $4.3 million for the years ended December 31, 2022 and 2021, respectively.

Advertising costs: Advertising costs are expensed as incurred. Advertising costs were $28 thousand and $34 thousand for the years ended December 31, 2022 and 2021, respectively.

Stock-based compensation: The Company recognizes all employee stock-based compensation as an expense in the consolidated statements of operations. Equity-classified awards are measured at the grant date fair value of the award. The Company estimates grant date fair value using the Black-Scholes-Merton option-pricing model and accounts for forfeitures as they occur. Excess tax benefits of awards related to stock option exercises are recognized as an income tax benefit in the consolidated statements of operations and reflected in operating activities in the consolidated statements of cash flows.

Commitments and contingencies: Liabilities for loss contingencies arising from claims, assessments, litigation, fines, and penalties and other sources are recorded when it is probable that a liability has been incurred and the amount can be reasonably estimated. Legal costs incurred in connection with loss contingencies are expensed as incurred.

Fair value measurements: The Company uses valuation approaches that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. The Company determines fair value based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels:

- Level 1 inputs: Unadjusted quoted prices in active markets for identical assets or liabilities accessible to the reporting entity at the measurement date.

- Level 2 inputs: Other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.

- Level 3 inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at measurement date.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

Valuation of business combination: The Company allocates the consideration of a business acquisition to the assets acquired and liabilities assumed based on their fair values at the date of acquisition, including identifiable intangible assets which either arise from a contractual or legal right or are separable from Goodwill. The Company bases the fair value of identifiable intangible assets acquired in a business combination on detailed valuations that use information and assumptions provided by management, which consider management's best estimates of inputs and assumptions that a market participant would use. The Company allocates to Goodwill any excess purchase price over the fair value of the net tangible and identifiable intangible assets acquired. Transaction costs associated with a business combination are expensed as incurred and recorded as merger related costs.

Subsequent events: The Company has evaluated potential subsequent events through the date the financial statements were issued within our Annual Report on Form 10-K. See Note 17 to these Consolidated Financial Statements.

Net loss per share: Basic loss per share is computed by dividing loss available to common shareholders by the weighted-average number of shares of common stock outstanding during the period. Diluted loss per share is computed by dividing loss available to common shareholders by the weighted-average number of shares of common shares outstanding during the period increased to include the number of additional common shares that would have been outstanding if the potentially dilutive securities had been issued, using the treasury-stock method. As the Company incurred losses for all periods presented, potentially dilutive securities have been excluded from fully diluted loss per share as their impact is anti-dilutive and would reduce the loss per share.

Note 5. Inventory

The Company's inventory consists of the following:

	December 31, 2022	December 31, 2021
Finished goods	$ -	$ 23
Work in process	9	138
Raw materials	44	314
Total inventory	$ 53	$ 475

Note 6. Fixed Assets

Presented in the table below are the major classes of fixed assets by category:

	December 31, 2022	December 31, 2021
Equipment	$ 2,962	$ 2,733
Furniture and fixtures	6	6
Leasehold improvements	612	251
Fixed assets, gross	3,580	2,990
Less accumulated depreciation	(2,474)	(1,970)
Fixed assets, net	$ 1,106	$ 1,020

Depreciation expense from continuing operations for the years ended December 31, 2022 and 2021 was $522 thousand and $550 thousand, respectively.

Note 7. Leases

During October 2021, the Company entered into a new $491 thousand equipment financing lease. The Company leases its laboratory, research and administrative office spaces under various operating leases. As of December 31, 2022, the Company leased facilities in Maple Grove, Minnesota and in San Diego, California under arrangements which expire in 2027. These leases require monthly rent with periodic rent increases. Under the agreements, the Company is also liable for certain insurance, property tax and common area maintenance costs. As of April 1, 2021 the Company commenced a new lease for its corporate headquarters. The Company recorded a ROU asset and operating lease obligation of $83 thousand related to this lease. In January 2022, the Company recorded a $1.2 million ROU asset and related liability upon the signing of a new 5-year lease in San Diego, California.

The components of operating and finance lease expense in continuing operations for the years ended December 31, are as follows:

	2022	2021
Operating lease cost	$ 441	$ 504
Finance lease cost:		
Depreciation of ROU assets	$ 204	$ 35
Interest on lease liabilities	34	8
Total finance lease cost:	$ 238	$ 43
Variable lease costs	$ -	$ -
Short-term lease costs	-	-
Total lease continuing operations expense	$ 679	$ 547

Amounts reported in the consolidated balance sheet from continuing operations as of December 31, 2022 and 2021 are as follows:

	2022	2021
Operating leases:		
Operating lease ROU assets, net	$ 1,542	$ 673
Operating lease current liabilities	$ 313	$ 174
Operating lease long-term liabilities	1,301	516
Total operating lease liabilities	$ 1,614	$ 690
Finance leases:		
Equipment	$ 744	$ 477
Accumulated depreciation	(244)	(63)
Finance leases, net	$ 500	$ 414
Current installment obligations under finance leases	$ 252	$ 157
Long-term portion of obligations under finance leases	273	293
Total finance lease liabilities	$ 525	$ 450

Equipment subject to finance leases are classified within fixed assets, net, on the accompanying consolidated balance sheets.

Supplemental cash flow related to operating and finance leases of the Company's continuing operations is as follows for the years ended December 31, 2022 and 2021:

	2022	2021
Cash paid amounts included in the measurement of lease liabilities from continuing operations:		
Operating cash flows used for operating leases	$ (265)	$ (509)
Financing cash flows used for finance leases	$ (191)	$ (37)
Financing cash flows provided by finance leases	$ 266	$ 492

Other supplemental information related to operating and finance leases of the Company's continuing operations is as follows as of December 31, 2022 and 2021:

	2022	2021
Weighted average remaining lease term (in years):		
Operating leases	4.45	5.42
Finance leases	2.05	2.75
Weighted average discount rate:		
Operating leases	8.30%	9.88%
Finance leases	6.90%	6.54%

Annual future payments of lease liabilities under noncancelable leases as of December 31, 2022 are as follows:

	Operating leases	Finance leases
2023	$ 433	$ 280
2024	423	235
2025	427	50
2026	441	-
2027	215	-
Thereafter	-	-
Total undiscounted lease payments	1,939	566
Less: imputed interest	(325)	(41)
Total lease liabilities	$ 1,614	$ 525

Note 8. Income Taxes

The components of loss before income taxes from continuing operations consist of the following.

	2022	2021
United States	$ (15,807)	$ (18,575)
Foreign	-	-
Total loss before income taxes	$ (15,807)	$ (18,575)

The Company did not record any current, deferred, or net income tax expense (benefit) from continuing operations in 2022 or 2021. Total income tax expense (benefit) from continuing operations differed from the amounts computed by applying the U.S. federal income tax rate of 21% to pretax income as a result of the following for the years ended December 31:

	2022	2021
Computed "expected" tax expense	$ (3,219)	$ (3,901)
Deferred rate change	(132)	84
State taxes, net of federal tax effect	(822)	(752)
Non-deductible transaction costs	-	222
Non-deductible interest	2	664
R&D tax credit	238	(238)
Sale of *vivo*Pharm business	(72)	
Other, net	117	(51)
Change in valuation allowance	3,888	3,972
Income tax expense (benefit)	$ -	$ -

The tax effects of temporary differences from continuing operations that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below as of December 31:

	2022	2021
Deferred tax assets		
Accrued liabilities	$ 109	$ 47
Capitalized R&D costs	3,233	1,931
Intangibles	107	127
Fixed assets	2	-
Stock compensation	248	160
Lease liability	478	170
Loss carryforward	20,750	18,144
Tax credit carryforward	1,085	1,406
Other temporary differences	3	4
Total gross deferred tax assets	26,015	21,989
Valuation allowance	(25,614)	(21,807)
Total deferred tax assets	$ 401	$ 182
Deferred tax liabilities		
Fixed assets	$ -	$ (17)
Lease assets	(401)	(165)
Total gross deferred tax liabilities	$ (401)	$ (182)
Net deferred tax asset	$ -	$ -

The Company assessed that the valuation allowance against its deferred tax assets is still appropriate as of December 31, 2022 and 2021, based on the consideration of all available positive and negative evidence using the "more likely than not" standard required when accounting for income taxes.

Under the Code, certain corporate stock transactions into which the Company has entered or may enter in the future could limit the amount of the net operating loss carryforwards that can be utilized in future periods. The Company has completed a review of historical stock transactions, as well as the current stock transactions completed in conjunction with the Merger and concluded our federal net operating loss and R&D credit carryforwards are subject to limitations under Section 382 and 383 of the Internal Revenue Code. As of December 31, 2022, the Company has federal net operating loss carryforwards of $78.3 million. Of this amount, $11.9 million relate to losses originating in tax years beginning prior to January 1, 2018 and expire between 2026 and 2037. The federal net operating losses of $66.4 million generated in tax years beginning on or after December 31, 2017 do not expire.

On August 9, 2022, the Creating Helpful Incentives to Produce Semiconductors ("CHIPS") Act was signed into law creating a new advanced manufacturing investment credit under new Internal Revenue Code section 48D. On August 16, 2022, the Inflation Reduction Act (IRA) was signed into law, which, among other changes, created a new corporate alternative minimum tax (AMT) based on adjusted financial statement income and imposes a 1% excise tax on corporate stock repurchases. The effective date of these provisions is January 1, 2023. The CHIPS Act and IRA did not have a material impact on the Company's financial statements for the year-ended December 31, 2022.

As of December 31, 2022 and 2021, the Company had no liability for unrecognized tax benefits recorded in continued operations. The Company does not expect the liability for unrecognized tax benefits to change in the next twelve months.

The Company has elected to classify tax-related accrued interest and penalties as a component of income tax expense.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. As of December 31, 2022, the Company was no longer subject to income tax examinations for taxable years before 2019 in the case of U.S. federal taxing authorities, and taxable years generally before 2018 in the case of state and local taxing jurisdictions.

Note 9. Long-Term Debt

Long-term debt consists of the following:

	December 31, 2022	December 31, 2021
Economic Injury Disaster Loan	$ 57	$ 57
Total long-term debt	$ 57	$ 57

Future annual principal repayments due on the long-term debt as of December 31, 2022 are as follows:

	Amount
2023	$ 1
2024	1
2025	1
2026	1
2027	1
Thereafter	52
Total	$ 57

Department of Employment and Economic Development ("DEED") loan

On March 10, 2015, the Company received an interest free loan with a loan maturity date of March 10, 2022 from the Minnesota DEED under the State Small Business Credit Initiative Act of 2010. The funds were received under the Angel Loan Fund Program which are provided to early-stage small businesses for financial support through direct loans. Upon consummation of the merger with CGI on March 30, 2021, the Company triggered the 30% repayment premium and this loan was repaid.

2020 Convertible Notes

Effective February 8, 2021 the Company's shareholders and 2020 Convertible Note holders approved amendments to the 2020 Convertible Notes to allow for the issuance of up to $10.0 million in 2020 Convertible Notes for cash (plus up to approximately $3.9 million of 2020 Convertible Notes in exchange for the cancellation of Series B Preferred stock) as well as modifications to the financing's terms for any 2020 Convertible Noteholder that invested at least $3.0 million of cash since May 4, 2020 in the offering (a "Major Investor"). As of March 12, 2021, the Company completed the $10.0 million 2020 Convertible Note offering. The Company raised approximately $5.0 million from the sale of 2020 Convertible Notes from January 1, 2021 through March 12, 2021 of which approximately $3.9 million were to related parties, including former StemoniX Board members as well as a more than 5% owner of Series B Preferred stock. For any Major Investor, the modified terms provide for a fixed conversion discount on the 2020 Convertible Notes of 20% and a common stock warrant equal to 20% of the amount invested in all 2020 Convertible Notes by such Major Investor divided by the weighted average share price of the Common Stock over the five trading days prior to the closing of the Merger. One 2020 Convertible Note holder that had previously invested $1.25 million in the offering invested an additional $3.0 million on February 23, 2021 and upon the Merger received a warrant to purchase 28,778 shares of the Company's common stock at an exercise price of $29.5295 per share (the "Major Investor Warrant"). At the time of the Merger, the outstanding principal of the 2020 Convertible Notes of approximately $12.7 million plus accrued interest of $468 thousand were exchanged for 667,788 shares of the Company's common stock. In connection with this exchange, the Company recorded a debt extinguishment loss of $2.5 million in the first quarter of 2021. The weighted average interest rate on the 2020 notes during the year ended December 31, 2021 was 18.22%.

Paycheck Protection Program Loan

In April 2020, the Company applied for and received a $730 thousand loan under the Payroll Protection Plan ("PPP") as part of the Coronavirus Aid, Relief, and Economic Security Act's ("CARES Act"). Under the PPP, the Company was able to receive funds for two and a half months of payroll, rent, utilities, and interest cost. In April 2021 the SBA fully forgave the PPP loan. The $730 thousand of PPP loan forgiveness was recorded as a reduction of operating costs during 2020.

Economic Injury Disaster Loan

In 2020 the Company received a $57 thousand Economic Injury Disaster Loan ("EIDL") loan from the Small Business Administration in connection with the COVID-19 impact on the Company's business. This loan bears interest at 3.75% and is repayable in monthly installments starting in June 2022 with a final balance due on June 21, 2050.

Note 10. Stockholders' Equity

Common Stock

Holders of common stock are entitled to one vote per share, to receive dividends if and when declared, and, upon liquidation or dissolution, are entitled to receive all assets available for distribution to stockholders. The holders have no preemptive or other subscription rights and there are no redemption or sinking fund provisions with respect to such shares. Common stock is subordinate to the preferred stock with respect to dividend rights and rights upon liquidation, winding up and dissolution of the Company.

Reverse Stock Split

On July 14, 2022, the Company's stockholders approved a reverse stock split (the "Reverse Split") of the Company's issued and outstanding shares of Common Stock in the range of one for five to one for fifteen shares. On October 18, 2022, the Company's Board of Directors approved a Reverse Split of one for five shares effective November 1, 2022. As a result of the reverse split, every 5 shares of the Company's Common Stock issued and outstanding were converted into one share of Common Stock. No fractional shares were issued in connection with the reverse split. Stockholders who would otherwise be entitled to a fractional share of Common Stock instead received cash in lieu of fractional shares based on the average of the closing sales prices of the Company's Common Stock as quoted on the Nasdaq Capital Market on the five trading days immediately prior to November 1, 2022. The reverse split did not reduce the number of authorized shares of the Common Stock or preferred stock (the "Preferred Stock") or change the par values of the Company's Common Stock or Preferred Stock. The Reverse Split affected all stockholders uniformly and did not affect any stockholder's ownership percentage of the Company's shares of Common Stock (except to the extent that the reverse split would result in some of the stockholders receiving cash in lieu of fractional shares). All outstanding common stock options, warrants and restricted stock units entitling their holders to receive or purchase shares of the Company's Common Stock have been adjusted as a result of the reverse split, as required by the terms of each security. All historical share and per share amounts presented herein have been retroactively adjusted to reflect the impact of the Reverse Split.

Lincoln Park Capital Fund, LLC Agreement

On March 28, 2022, the Company entered into a purchase agreement, or Purchase Agreement, with Lincoln Park Capital Fund, LLC ("Lincoln Park"), which, subject to the terms and conditions, provides that the Company has the right to sell to Lincoln Park and Lincoln Park is obligated to purchase up to $15.0 million of its common shares. Under the Purchase Agreement, the Company agreed to issue a commitment fee of 81,190 common shares as consideration for Lincoln Park entering into the Purchase Agreement.

At The Market Financing

On April 8, 2022, the Company entered into an Equity Distribution Agreement with Canaccord Genuity LLC (the "Canaccord"), pursuant to which the Company may issue and sell, from time to time, shares of its common stock having an aggregate offering price of up to $20,000,000, depending on market demand, with Canaccord acting as an agent for sales. As of December 31, 2022, the Company had issued 41,162 shares of common stock under the Sales Agreement with the Canaccord.

As further described in Note 17, on March 23, 2023, the Company terminated the arrangements with both Lincoln Park and Canaccord.

For the year ended December 31, 2022, the Company incurred $250 thousand of issuance costs related to Lincoln Park and Canaccord Genuity LLC ATM arrangements which were recorded in the Condensed Consolidated Statements of Stockholders' Equity.

Preferred Stock

Series A and B Preferred Stock

As of December 31, 2020, the Company had 4,611,587 shares of Series A Preferred Stock (the "Series A Preferred") 3,489,470 shares of Series B Preferred Stock (the "Series B Preferred") issued and outstanding (collectively, the "Preferred Stock"). The Company had classified the Preferred Stock as temporary equity in the consolidated balance sheets as the Preferred Shareholders controlled a Deemed Liquidation Event, as defined below, under the terms of the Series A and Series B Preferred Stock as described below. Effective with the Merger, all the Series A Preferred and the Series B Preferred shares were exchanged for 5,973,509 and 4,524,171 shares of Vyant Bio common stock, respectively, and the related carrying value was reclassified to common stock and additional paid-in capital.

Series C Preferred Stock

Effective March 15, 2021, StemoniX shareholders approved the Merger with Cancer Genetics and the authorization of $2.0 million of Series C Preferred Stock ("Series C Preferred"). Effective with the Merger on March 30, 2021, the Series C Preferred shares were exchanged for 699,395 shares of Vyant Bio common stock and the related carrying value was reclassified to common stock and additional paid-in capital.

Effective with the Merger, all Series A, B and C Preferred shares were converted to StemoniX common stock which were exchanged for Vyant Bio common stock. As of December 31, 2022, the Company is authorized to issue 9.8 million shares of Preferred stock of which none were outstanding.

Warrants

Common Stock Warrant

The Company issued the Major Investor Warrant on February 23, 2021. Effective with the Merger, the Major Investor Warrant was exchanged for a warrant to purchase 28,778 shares of the Company's common stock at an exercise price of $29.5295. Prior to this exchange, the Major Investor Warrant was classified as a liability and the Company recognized a $214 thousand gain in the first quarter of 2021 related to fair value adjustments. The fair value of the Major Investor Warrant was $421 thousand at the time of the Merger and reclassified to additional paid in capital.

In connection with the Merger, the Company assumed 431,537 common stock warrants issued in prior financings of which 426,361 remain outstanding as of December 31, 2022. A summary of all common stock warrants outstanding as of December 31, 2022 is as follows:

Issuance Related to:	Exercise Price	Outstanding Warrants	Expiration Dates
2020 Convertible Note	$ 29.55	28,778	Feb 23, 2026
2021 offerings	$ 17.50	324,828	Feb 10, 2026 - Aug 3, 2026
Advisory fees	$ 12.10 - 37.95	98,578	Jan 9, 2024 - Oct 28, 2025
Debt	$ 138.00	2,955	Mar 22, 2024
Total		455,139	

Preferred Stock Warrants

In connection with the issuance of the Series A Convertible Preferred and Series B Convertible Preferred, the Company issued warrants (the "Series A Warrants" and "Series B Warrants", respectively, and collectively, the "Preferred Warrants") as compensation to non-employee placement agents. The Series A Warrants and Series B Warrants were issued on April 28, 2017 and May 18, 2019, respectively. The Company determined the Preferred Warrants should be classified as equity as they were issued as vested share-based payment compensation to nonemployees. The Preferred Warrants were recorded in stockholders' equity at fair value upon issuance with no subsequent remeasurement. As part of the Merger, the Preferred Warrants were converted and settled for a total of 8,621 shares of the Company's common stock.

Note 11. Fair Value Measurements

During the first quarter of 2021, the Company elected to account for the $3.0 million investment in the 2020 Convertible Notes issued to the Major Investor using the fair value method. Further, the Major Investor Warrant was deemed to be a liability classified instrument due its variable settlement features. Both of these instruments were classified as Level 3 measurements within the fair value hierarchy.

The fair value of the Company's 2020 Convertible Note issued to the Major Investor is measured as the sum of the instrument's parts, being the underlying debt instrument and the conversion feature. The conversion feature was valued using the probability weighted conversion price discount. The instrument provided the holder the right to convert the instrument into shares of Series B Preferred Stock at a 20% discount. Given the timing of the issuance of the instrument near the Merger date, management determined that there was a 99.5% probability of the holders converting the instrument to Company shares at a 20% discount.

The Company valued the warrants issued with the 2020 Convertible Notes using a Black-Scholes-Merton model using the value of the underlying stock and exercise price of $2.01, along with a risk-free interest rate of 0.59% and volatility of 86%. The Company estimated the term of the warrant to be 5 years.

The Company's 2020 Convertible Notes contain a share settled redemption feature ("Embedded Derivative") that requires conversion at the lesser of specified discounts from qualified financing price per share or the fair value of the common stock at the time of conversion. The discount changes based on the passage of time between issuance of the convertible note and the conversion event. This feature is considered a derivative that requires bifurcation because it provides a specified premium to the holder of the note upon conversion. The Company measures the share-settlement obligation derivative at fair value based on significant inputs that are not observable in the market. This results in the liability classified as a Level 3 measurement within the fair value hierarchy.

Upon the Merger, all of the Level 3 instruments were exchanged for Vyant Bio equity classified instruments. Prior to their exchange, all of these instruments were marked to their fair market values with corresponding changes recorded in the statement of operations in the first quarter of 2021.

In the fourth quarter of 2021, the Company classified the *vivo*Pharm business as discontinuing operations and applied held for sale accounting. The Company valued the *vivo*Pharm business as of December 31, 2021 equally weighting public company revenue multiples as of December 31, 2021 and comparable transaction revenue multiples, which are classified as Level 3 measurements within the fair value hierarchy. The Company updated the valuation of the *vivo*Pharm business during the quarter ending March 31, 2022 based on equally weighting public company revenue multiples and comparable transaction revenue multiples, which resulted in a $4.5 million decrease to the fair value of *vivo*Pharm in the first quarter of 2022. The Company recognized an impairment charge of $4.3 million during the quarter ended March 31, 2022, which decreased *vivo*Pharm's net carrying value, net of estimated disposal costs from $9.2 million as of December 31, 2021 to $4.9 million. During the second quarter of 2022, the Company received two offers for mutually exclusive components of the *vivo*Pharm business and assessed the carrying value of each asset group using the estimated net sales proceeds based on these offers. As a result, the Company recorded a net impairment charge of $1.5 million during the second quarter of 2022. The Company recorded an impairment recovery of $388 thousand during the third quarter of 2022 based upon September 30, 2022 *vivo*Pharm net assets. As described in Note 3, the Company completed the sales of *vivo*Pharm's operating subsidiaries in the fourth quarter of 2022 resulting in a loss upon sale of $106 thousand.

The following tables present changes in fair value of level 3 valued instruments as of and for the years ended December 31, 2022 and 2021:

	*vivo*Pharm Business
Balance - January 1, 2022	$ 11,000
Additions	-
Measurement adjustments	(5,528)
Sale of *vivo*Pharm businesses	(5,472)
Balance - December 31, 2022	$ -

The following tables present changes in fair value of level 3 valued instruments for the year ended December 31, 2021:

	2020 Convertible Note	Warrant	Embedded Derivative	*vivo*Pharm Business
Balance - January 1, 2021	$ -	$ -	$ 1,690	$ -
Additions	3,746	635	325	11,000
Measurement adjustments	4	(214)	250	-
Settlement	(3,750)	(421)	(2,265)	-
Balance - December 31, 2021	$ -	$ -	$ -	$ 11,000

Note 12. Loss Per Share

Basic loss per share is computed by dividing the net loss after tax attributable to common stockholders by the weighted average shares outstanding during the period. Diluted loss per share is computed by including potentially dilutive securities outstanding during the period in the calculation of weighted average shares outstanding. The Company did not have any dilutive securities during the periods presented; therefore, diluted loss per share is equal to basic loss per share.

Presented in the table below is a reconciliation of the numerator and denominator for the basic and diluted loss per share calculations for the years ended December 31, 2022 and 2021:

	December 31,	
	2022	2021
Net loss from continuing operations	$ (15,807)	$ (18,575)
Net loss from discontinuing operations	(6,883)	(22,284)
Net loss	$ (22,690)	$ (40,859)
Basic and diluted weighted average shares outstanding	5,868,402	4,522,889
Basic and diluted net loss per share:		
Continuing operations	$ (2.69)	$ (4.11)
Discontinuing operations	(1.18)	(4.92)
Net loss	$ (3.87)	$ (9.03)

The following securities were not included in the computation of diluted shares outstanding for the years ended December 31, 2022 and 2021 because the effect would be anti-dilutive:

	December 31,	
	2022	2021
Common Stock warrants	455,139	459,382
Common Stock options	428,301	464,019
Restricted stock	77,104	-
Total	960,544	923,401

Note 13. Stock-Based Compensation

The Company has three legacy equity incentive plans: the Cancer Genetics, Inc. 2008 Stock Option Plan (the "2008 Plan") and the Cancer Genetics Inc. 2011 Equity Incentive Plan (the "2011 Plan"), and the StemoniX Inc. 2015 Stock Option Plan (the "2015 Plan", and together with the 2008 Plan, and the 2011 Plan, the "Frozen Stock Option Plans"). The Frozen Stock Option Plans as well as the 2021 Plan (as defined below) are meant to provide additional incentive to officers, employees and consultants to remain in the Company's employment. Options granted are generally exercisable for up to 10 years. Effective with the Merger, the Company is no longer able to issue options from the Frozen Stock Option Plans. The number of common stock options issued under the 2015 plan were adjusted for the Merger exchange ratio resulting in an incremental 38,376 options outstanding.

Effective with the Merger, the Vyant Bio 2021 Equity Incentive Plan (the "2021 Plan") came into effect, pursuant to which the Company's Board of Directors may grant up to 900,000 of equity-based instruments to officers, key employees, and non-employee consultants. On March 30, 2021, the Company granted 230,300 stock options to officers and other employees, 15,618 stock options to independent Board members and a restricted stock unit ("RSU") of 1,735 shares to the Company's Board chair. The options granted to officers and employees vest 25% one year from the grant date and thereafter equally over the next 36 months. The options granted to Board members vested upon grant. The Board chair RSU vests one year from the grant date.

As StemoniX was the acquirer for accounting purposes, the pre-Merger vested stock options granted by CGI under the 2008 and 2011 Plans are deemed to have been exchanged for equity awards of the Company. The exchange of StemoniX stock options for options to purchase Company common stock was accounted for as a modification of the StemoniX stock options; however, the modification did not result in any incremental compensation expense as the modification did not increase the fair value of the stock options.

For StemoniX stock options issued prior to the Merger, the expected volatility was estimated based on the average historical volatility of similar entities with publicly traded shares as StemoniX's shares historically were not publicly traded and its shares rarely traded privately. For common stock options granted at the time of the Merger, the Company used Vyant Bio's historical volatility to determine the expected volatility of post-Merger option grants. Subsequently, the Company used a comparable public company group to estimate the anticipated volatility of the Company's stock. The risk-free rate for the expected term of the option is based on the U.S. Treasury yield curve at the date of grant.

The Company uses a simplified method to determine the expected term for the valuation of employee options. This method effectively assumes that exercise occurs over the period from vesting until expiration, and therefore, the expected term is the midpoint between the service period and the contractual term of the award. The simplified method is applicable to options with service conditions. For options granted to nonemployees, the contractual term is used for the valuation of the options.

As of December 31, 2022, there were 533,495 additional shares available for the Company to grant under the 2021 Plan. The grant-date fair value of each option award is estimated on the date of grant using the Black-Scholes-Merton option-pricing model. The assumptions for stock option grants during the years ended December 31, 2022 and 2021 are provided in the following table.

	2022	2021
Valuation assumptions		
Expected dividend yield	0.0%	0.0%
Expected volatility	56.3% - 70.72%	69.5%-123%
Expected term (years) - simplified method	3.0 - 6.1	5.5 - 6.1
Risk-free interest rate	1.74% - 3.20%	0.95% - 1.39%

Stock option activity during years ended December 31, 2022 and 2021 is as follows:

	Number of Options	Weighted average exercise price	Weighted average remaining contractual term
Balance as of January 1, 2021	151,147	$ 9.10	8.7
Granted	307,988	21.05	
StemoniX options exchanged for Vyant Bio options	(136,276)	9.20	
Vyant Bio options issued to StemoniX option holders	174,652	7.20	
Options assumed in Merger	11,168	229.75	
Exercised	(7,419)	6.05	
Forfeited	(34,462)	18.45	
Expired	(2,777)	9.60	
Balance as of December 31, 2021	464,021	$ 20.95	8.6
Exercisable as of December 31, 2021	127,119	$ 27.90	7.1
Balance as of January 1, 2022	464,021	$ 20.95	8.6
Granted	148,855	5.02	
Exercised	(1,034)	4.80	
Forfeited	(141,306)	17.64	
Expired	(42,235)	36.33	
Balance as of December 31, 2022	428,301	$ 14.97	7.5
Exercisable as of December 31, 2022	232,175	$ 18.18	6.4

The weighted average grant-date fair value of options granted during the years ended December 31, 2022 and 2021 were $10.23 and $17.55, respectively.

The Company recognized stock-based compensation in continuing operations related to different instruments for the years ended December 31, as follows:

	December 31,	
	2022	2021
Stock options	$ 782	$ 973
Shares issued for services	404	30
Total	$ 1,186	$ 1,003

As of December 31, 2022, there was $1.6 million of total unrecognized compensation cost related to unvested stock options granted under the Plan. That cost is expected to be recognized over a weighted average period of 2.2 years.

Note 14. Segment Information and Risk Concentration

The Company reports segment information based on how the Company's chief operating decision maker ("CODM") regularly reviews operating results, allocates resources and makes decisions regarding business operations. For segment reporting purposes, the Company's business structure is comprised of one operating and reportable segment.

During both years ended December 31, 2022 and 2021, four customers and three customers accounted for approximately 77% and 47%, respectively, of the consolidated revenue from continuing operations.

During years ended December 31, 2022 and 2021, approximately 47% and 21%, respectively, of the Company's consolidated revenue from continuing operations was earned outside of the U.S.

Customers representing 10% or more of the Company's total revenue from continuing operations for years ended December 31, 2022 and 2021, are presented in the table below:

	December 31,	
	2022	2021
Customer A	42%	18%
Customer B	10%	9%
Customer C	4%	11%
Customer D	15%	1%
Customer E	10%	6%
Customer F	N/A	19%

Note 15. Related Party Transactions

In 2020, the Company raised approximately $1.5 million from the sale of 2020 Convertible Notes in 2020 from related parties, including former StemoniX Board members as well as one shareholder who owned more than 5% of Series B Preferred stock. The Company raised approximately $3.9 million from the sale of 2020 Convertible Notes from January 1, 2021 through March 12, 2021 from related parties, including former StemoniX Board members as well as one shareholder who owned more than 5% of Series B Preferred stock. This Series B preferred stock shareholder was also a Major Investor and received the Major Investor Warrant on February 23, 2021. Effective with the Merger, the Major Investor Warrant was exchanged for a warrant to purchase 28,778 shares of the Company's common stock at an exercise price of $29.5295 per share.

During the fourth quarter of 2021, the Company paid a third-party collaboration partner $89 thousand as a reimbursement of third-party costs incurred by the collaborator in connection with the collaboration arrangement. In September 2021, an executive's family member became an employee of this collaborator. Separately, in the fourth quarter of 2021, the Company entered into a $60 thousand consulting agreement with this third-party collaborator. During the first quarter of 2022, the Company paid the third-party collaboration partner $39 thousand as a reimbursement of third-party costs incurred by the collaborator in connection with the collaboration arrangement. The arrangements with this third-party collaborator had arms-length terms.

As disclosed in Note 3, the Company sold RDDT a *vivo*Pharm Company Pty Ltd and *vivo*Pharm Europe Ltd to Sabine Brandt as trustee for the Brandt Family Trust. Mrs. Brandt is a former Company employee and is married to a former officer of the Company.

Note 16. Contingencies and Commitments

We are not currently subject to any material legal proceedings. However, we may from time to time become a party to various legal proceedings arising in the ordinary course of our business.

Australian Adult Clinical Trial: The Company's Australian subsidiary, *vivo*Pharm Pty Ltd, entered into a master services agreement and related statement of work with an Australian contract research organization in November 2022 to support the Company's adult Rett Syndrome clinical trial. The statement of work aggregates approximately 3.9 million Australian dollars and can be cancelled with 60 days' notice. This clinical trial was suspended in January 2023 as the Company evaluates its strategic alternatives.

Note 17. Subsequent Events

The Company has evaluated subsequent events from the balance sheet date through March 31, 2023, the date at which the financial statements were available to be issued as follows:

Continuing Operations

On January 4, 2023, the Company announced that it had engaged LifeSci Capital as its financial advisor to assist in exploring a range of strategic alternatives focused on enhancing shareholder value. There can be no assurance that this review process will result in any changes to the Company's current business plans or lead to any specific action or transaction.

The Company's Board of Directors (the "Board") approved a plan on January 31, 2023 to preserve the Company's cash to be able to continue to pursue a satisfactory strategic alternative for the purpose of maximizing the value of the Company's business while also having sufficient cash to adequately fund an orderly wind down of the Company's operations (the "Cash Preservation Plan") in the event it is unable to secure a satisfactory strategic alternative. As part of the Cash Preservation Plan, the Company implemented a reduction in force which included the Company's former President and Chief Executive Officer, and Chief Scientific Officer. The Company will record a charge of $954K thousand in 2023 related to termination benefits which will be paid in 2023 for these employees.

On March 9, 2023, the Company terminated its January 2022, San Diego office and laboratory lease agreement. The effective date of the termination is March 31, 2023. The landlord is retaining approximately $45 thousand as an early termination fee. This lease termination will result in a $1.2 million reduction in future operating lease payments.

On March 7, 2023, the Company sold its equipment in its San Diego laboratory to a third party and received $200,000 in consideration for such sale.

On March 24, 2023 the Company terminated its (a) Equity Distribution Agreement, dated April 8, 2022, by and between the Company and Canaccord Genuity LLC, regarding the issue and sale, from time to time, of shares of the Company's common stock for an aggregate offering price of up to $20,000,000, and (b) Purchase Agreement, dated March 28, 2022, by and between the Company and Lincoln Park Capital Fund, LLC, regarding the issue and sale, from time to time, of shares of the Company's common stock for an aggregate offering price of up to $15,000,000.

Further, on March 24, 2023, the Company filed post-effective amendments to certain of its registration statements previously filed with the SEC, including post-effective amendments to each of: (i) Registration Statement Nos. 333-249513, 333-252628, 333-239497, and 333-218229 on Form S-3; (ii) Registration Statement Nos. 333-191520, 333-191521, 333-196198, 333-205903, 333-256225 and 333-214599 on Form S-8; and (ii) Registration Statement No. 333-215284 and 333-264595 on Form S-1 (such post-effective amendments, collectively the "Post-Effective Amendments" and such registration statements, collectively the "Registration Statements"). In accordance with undertakings made by the Company in each of the Registration Statements to remove from registration, by means of a post-effective amendment, any and all securities of the Company that were registered for issuance that remain unsold at the termination of the offerings, the Company removed from registration any and all securities of the Company registered but unsold under each of the Registration Statements. As a result of this deregistration, no securities remain registered for sale pursuant to the Registration Statements.

On March 29, 2023, the Company entered into a commitment to renew certain expiring insurance policies for a premium of $1.7 million.

Discontinuing Operations

To complete the disposition of the Company's former *vivo*Pharm business and to resolve certain issues that had arisen with the Buyer, on March 13, 2023, the Company sold *vivo*Pharm to the Buyer for a nominal sum. As part of the sale of *vivo*Pharm to Buyer, the Company provided that *vivo*Pharm had cash of at least $200 thousand and the Company assumed certain specific *vivo*Pharm liabilities, principally liabilities directly associated with the proposed Phase 2 Donepezil clinical trial in Australia (which the Company has placed on hold as it evaluates its strategic alternatives) and certain *vivo*Pharm tax liabilities through the transaction's closing. The transaction was consummated effective March 13, 2023.

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

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls & Procedures

Our management, with the participation of our chief executive officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2022. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2022, our chief executive officer a concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

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

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

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those controls determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2022. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework (2013 framework) (COSO). Based on its assessment, management believes that, as of December 31, 2022, our internal control over financial reporting is effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

Other than changes related to the remediation activities discussed below, there were no changes in the Company's internal control over financial reporting during the quarter ended December 31, 2022, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Prior Material Weakness in Internal Control over Financial Reporting

As previously reported in our Form 10-K for the year ended December 31, 2021, a material weakness in the Company's internal control over financial reporting was reported because the Company did not have appropriate controls to forecast revenue and cash flows to support the carrying value of intangible assets. After the Merger, the Company implemented the following enhancements to internal controls to address this material weakness:

- Hired a new CFO with significant experience in internal controls, US GAAP and financial forecasting;
- Established a financial planning and analysis function to analyze, forecast and report on the Company's operations;
- Developed a financial model to forecast *vivo*Pharm revenue based on inputs from management; and
- Redesigned our process and controls around valuation of the *vivo*Pharm business to include the development, critical evaluation and review of underlying assumptions and resulting valuations derived from a third-party valuation firm and third-party offers to acquire the vivoPharm business.

Management has concluded that the actions taken to strengthen the design of our internal controls over financial reporting and the operational effectiveness of these enhanced controls for a sufficient period of time during 2022, remediated the identified material weakness as of December 31, 2022.

Item 9B. Other Information.

Not applicable.

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

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Directors

The following table sets forth certain information about the current directors of the Company. Directors are elected to hold office until the next annual meeting of stockholders and until their successors are elected and qualified.

Directors	Age	Year First Became Director
John Fletcher (Board Chair)	77	2021
Geoffrey Harris	60	2014
Joanna Horobin	68	2021
Howard McLeod	56	2014
Paul Hansen	60	2021
John A. Roberts	64	2021
Yung-Ping Yeh	47	2021

Set forth below are brief biographical descriptions of the non-employees currently serving as the Company's directors, based on information furnished to the Company by such individuals.

John Fletcher

Mr. Fletcher is chair of the Company's Board since the merger (the "Merger") between the Company and StemoniX, Inc. ("StemoniX"), which closed on March 30, 2021, and brings to the board more than 30 years of strategy and financing experience across the pharmaceutical and healthcare industry. Mr. Fletcher also services on the Company's Audit, and Nominating and Corporate Committees of the Board of Directors. In 1983, Mr. Fletcher founded Fletcher Spaght, Inc., a consulting firm that provides growth-focused strategy assistance to client companies, and since its founding served as its Managing Partner from 1983-2021 when he became Managing Partner Emeritus. Since 2001, Mr. Fletcher has also served as the Managing Partner of Fletcher Spaght Ventures, a venture capital fund. Mr. Fletcher's current and past board experience includes both public and private companies. Mr. Fletcher currently serves as the board chairman of publicly-held Koru Medical and Clearpoint Neuro, Inc., as well as privately-held Metabolon. Mr. Fletcher serves on the Board of Directors of publicly-held OptiNose AS. Mr. Fletcher previously served on the boards of The Spectranetics Corporation, Autoimmune, Inc., Axcelis Technologies, Inc., Fischer Imaging Corp., Panacos Pharmaceuticals Inc. and NMT Medical Inc., all of which are public companies, and on the board of GlycoFi, Inc., a private company. In addition, Mr. Fletcher has served on the boards of many academic and non-profit institutions. Mr. Fletcher worked on the $2 billion acquisition of Spectranetics by Koninklijke Philips N.V. (Royal Philips) and the $400 million acquisition of GlycoFi by Merck & Co., Inc., and received the National Association of Corporate Directors (NACD) Director of the Year Award in 2018 specifically for his work at Spectranetics. He is Chairman Emeritus of the Corporate Collaboration Council at the Thayer School of Engineering/Tuck School of Business at Dartmouth College and serves on the Board of Advisors of Beth Israel Deaconess Medical Center and the Whitehead Institute at MIT. Mr. Fletcher is a graduate of Southern Illinois University (MBA), Central Michigan University (Master's Degree in International Finance), and George Washington University (BA) and was an instructor in International Business and a PhD candidate at the Wharton School of Business. He served as a Captain and jet pilot in the United States Air Force. Mr. Fletcher provides our Board with leadership experience in the biotech and pharmaceutical industries, in growth strategy and in early stage investing and his service on boards of public companies.

Geoffrey Harris

Geoffrey Harris is the chairman of the Company's Audit Committee and is a managing partner of c7 Advisors (a money management and healthcare advisory firm) since April 2014. From 2011 to 2014 he served as a managing director and co-head of the healthcare investment banking group at Cantor Fitzgerald, and from 2009-2011, he held a similar position at Gleacher & Company. Mr. Harris is also currently on the board of directors of Telemynd, Inc. (formerly known as MYnd Analytics), a telemedicine company focused on improving mental health care; connectRN, a privately held nurse workforce management company; Inseer, a privately held workplace safety company; and OPCM, a privately-held company focused on opioid addiction. Mr. Harris graduated from MIT's Sloan School of Management with an MS in Finance Management. Mr. Harris provides our Board with experience and leadership in healthcare advisory and policy research positions and decades in the finance industry.

Joanna Horobin

Dr. Horobin serves as the Chair of the Company's Compensation Committee of the Board of Directors and also serves on its Nominating and Corporate Governance Committee. Dr. Horobin served as the Senior Vice President and Chief Medical Officer of Idera Pharmaceuticals, Inc., a publicly traded clinical-stage biopharmaceutical company focused on the clinical development, and ultimately the commercialization, of drug candidates for both oncology and rare disease indications, from November 2015 until July 2019. Previously, Dr. Horobin served as the Chief Medical Officer of Verastem, Inc., a publicly traded biopharmaceutical company focused on developing and commercializing medicines to improve the survival and quality of life of cancer patients, from September 2012 to July 2015. Dr. Horobin currently serves as a member of the board of directors of Kynera Therapeutics Inc., a publicly-traded biopharmaceutical company, non-executive director of Nordic Nanovector ASA (publicly traded on the Oslo Stock Exchange), a member of the board of directors of Liquidia Corporation, a publicly traded biotechnology company, and chair of the board of directors of iOnctura SA. Dr. Horobin received her medical degree from the University of Manchester, England. Dr. Horobin provides our Board with an accomplished drug developer and biotech leader with over 35 years of experience in the pharmaceutical and biotech sector, having held multiple chief executive-level roles in biotech companies.

Howard McLeod, Pharm.D.

Dr. McLeod serves as the Chair of the Company's Nominating and Corporate Governance Committee of the Board of Directors. Dr. McLeod is a member of the Company's Board and is the Executive Clinical Director for Precision Health at Intermountain Healthcare. Most recently he was Medical Director, Precision Medicine for the Geriatric Oncology Consortium and a Professor at the University of South Florida Taneja College of Pharmacy. Previously he was Chair of the Department of Individualized Cancer Management and Medical Director of the DeBartolo Family Personalized Medicine Institute at the Moffitt Cancer Center and previously a Senior Member of the Moffitt Cancer Center's Division of Population Sciences. He also chaired the Department of Individualized Cancer Management at Moffitt. He joined Moffitt Cancer Center in September 2013. Prior to joining the Moffitt Cancer Center, Dr. McLeod was a Founding Director of the University of North Carolina Institute for Pharmacogenomics and Individualized Therapy since 2006. Dr. McLeod also held the prestigious title of Fred Eshelman Distinguished Professor at the UNC Eshelman School of Pharmacy from 2006 to 2013. Dr. McLeod has published over 580 peer-reviewed papers on pharmacogenomics, applied therapeutics and clinical pharmacology. He had served as Chief Scientific Advisor and a member of the board of directors of Gentris Corporation before its acquisition by Cancer Genetics (CGIX) in July 2014. Dr. McLeod provides our Board with over 30 years of experience in translational medicine, including his leading research in pharmacogenomics and moving innovative research into practical application across the clinical spectrum.

Paul Hansen

Mr. Hansen serves on the Company's Audit Committee of the Board of Directors. Mr. Hansen became a Board member upon the close of the Merger and was member of the Board of Directors of StemoniX since 2015. Since 2014, Mr. Hansen has served as a Senior Fellow with the University of Minnesota's Technological Leadership Institute. Mr. Hansen is a founder and, since 2016, has been President of Minnepura Technologies, SBC. From 1999 to 2014, Mr. Hansen held senior executive positions at 3M Company, including President and CEO of 3M Mexico. Mr. Hansen holds a BA in Chemistry and Economics from St. Olaf College and an MBA in Marketing Management from the Carlson School of Management at the University of Minnesota. Mr. Hansen provides our Board with global business and leadership experience.

John A. Roberts

On January 31, 2023, Mr. Roberts agreed in principle to step down as President and Chief Executive Officer effective as of February 3, 2023. On April 30, 2018, Mr. Roberts was appointed as the Company's Chief Executive Officer and President. Prior to that, Mr. Roberts had been the Company's interim Chief Executive Officer since February 2, 2018. Mr. Roberts had previously served as the Company's Chief Operating Officer since July 11, 2016. Prior to joining us, from August 1, 2015 to June 30, 2016, Mr. Roberts served as the Chief Financial Officer for VirMedica, Inc., an innovative technology solutions company that provides an end-to-end platform that enables specialty drug manufacturers and pharmacies to optimize product commercialization and management. Prior to VirMedica, from August 1, 2011 to July 31, 2015, Mr. Roberts was the Chief Financial and Administrative Officer for AdvantEdge Healthcare Solutions, a global healthcare analytics and services organization. Prior to that, Mr. Roberts was the Chief Financial Officer and Treasurer for InfoLogix, Inc., a publicly-traded healthcare-centric mobile software and solutions provider. He has also held CFO roles at leading public medical device and healthcare services firms including Clarient, Inc., a publicly-traded provider of diagnostic laboratory services and Daou Systems, Inc., a publicly-traded healthcare IT software development and services firm. In addition, he has held key senior executive roles with MEDecision, Inc., HealthOnline, Inc. and the Center for Health Information. Mr. Roberts earned a Bachelor of Science and a Master's degree in Business Administration from the University of Maine. He is a member of the Board of Directors and Immediate Past Chair for the Drug Information Association, a global neutral forum enabling drug developers and regulators access to education and collaboration. Mr. Roberts also serves on the Board of Directors of Cohere-Med Inc., a clinical analytics company, from February 2020 to present. Mr. Robert provides our Board with finance, business and leadership experience.

Yung-Ping Yeh

Yung-Ping Yeh, MS, MBA, PgMP, PMP co-founded StemoniX in April 2014 and, and served as its Chief Executive Officer and a Board Member. Upon the Merger, Mr. Yeh served as the Company's Chief Innovation Officer through February 11, 2022, at which time he stepped down and was deemed terminated as of that date by the Company without cause. Prior to co-founding StemoniX, Mr. Yeh commercialized multiple technologies to the tech industry. Highlights include serving as team lead for the first solid state drive product for Seagate Technology, leading the global partnership between Samsung and Seagate to create new flash technology and program managing the operating system software development for Dell enterprise storage systems. Mr. Yeh has successfully led through a multi-disciplinary approach for the last two decades of his career. Mr. Yeh holds a bachelor of science and master's degree in mechanical engineering (nanotechnology) from University of California, San Diego, and a master's degree in business administration from University of Minnesota's Carlson School of Management. He currently serves as CEO and Board Director of Vocxi Health and on the boards of Oncodea and LifeBridge, all oncology related companies. He has attained professional certifications in program and project management from the Project Management Institute and Mergers and Acquisitions from Northwestern's Kellogg School of Management. Mr. Yeh serves on the UC San Diego Alumni Board of Directors. Mr. Yeh provides our Board with leadership experience and deep knowledge of the StemoniX business.

Executive Officers

The following table sets forth certain information about the current executive officer of the Company:

Executive Officers	Age	Position and Office
Andrew D. C. LaFrence	60	President and Chief Executive Officer and Chief Financial Officer

Set forth below is a brief biographical description of the individual currently serving as the Company's executive officer, based on information furnished to the Company by such individual.

Andrew D. C. LaFrence, CPA

Mr. LaFrence became the Company's Chief Financial Officer upon the close of the Merger. Effective February 3, 2023 the Company's Board of Directors also appointed Mr. LaFrence as President and Chief Executive Officer. Previously, he served as StemoniX's Chief Financial Officer since August 2019 and in March 2020, he was also appointed as its Chief Operating Officer. Mr. LaFrence has 39 years of accounting and finance experience, including executive management positions at public and private life sciences companies. Previously, he was Senior Vice President and Chief Financial Officer of Biothera Pharmaceuticals, Inc. from May 2018 to August 2019, as well as Vice President Finance, Information Systems and Chief Financial Officer at Surmodics, Inc. (NASDAQ: SRDX) for five years. Prior to Surmodics, Mr. LaFrence served as Chief Financial Officer for CNS Therapeutics, a venture-backed intrathecal drug company. He was an audit partner at KPMG LLP where he focused on supporting venture-backed, high-growth medical technology, pharmaceutical, biotech and clean tech private and public companies. Mr. LaFrence is a certified public accountant and has a bachelor's degree in accounting and a minor in business administration from Illinois State University. Mr. LaFrence currently serves on the Board of Directors and Audit Committee Chair of InSitu Biologics, Inc., a nonopioid drug company, and American National Bank, an upper Midwest community bank and is the Board Chair at the University Enterprise Lab, St. Paul, MN, a life science incubator.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires the Company's directors and executive, officers, and persons who are beneficial owners of more than 10% of a registered class of the Company's equity securities, to file reports of ownership and changes in ownership with the SEC. These persons are required by SEC regulations to furnish the Company with copies of all Section 16(a) forms they file.

Based solely upon the Company's review of copies of Forms 3, 4 and 5 furnished to the Company, the Company believes that all of its directors, executive officers and any other applicable stockholders timely filed all reports required by Section 16(a) of the Exchange Act during the fiscal year ended December 31, 2022, except for a Form 4 for Paul R. Hansen that was due on November 11, 2021 that was filed on February 27, 2023.

Code of Business Conduct and Ethics

The Company has adopted a Code of Business Conduct and Ethics that applies to its directors, officers and employees. The purpose of the Code of Business Conduct and Ethics is to deter wrongdoing and to provide guidance to the Company's directors, officers and employees to help them recognize and deal with ethical issues, to provide mechanisms to report unethical or illegal conduct and to contribute positively to the Company's culture of honesty and accountability. The Company's Code of Business Conduct and Ethics is publicly available on the Company's website at www.vyantbio.com. If the Company makes any substantive amendments to the Code of Business Conduct and Ethics or grants any waiver, including any implicit waiver from a provision of the Code of Business Conduct and Ethics to its directors or executive officers, the Company will disclose the nature of such amendments or waiver on its website or in a current report on Form 8-K.

Audit Committee

The Board has established an Audit Committee currently consisting of Mr. Harris, Mr. Fletcher and Mr. Hansen. The Audit Committee's primary functions are to oversee and review: the integrity of the Company's financial statements and other financial information furnished by the Company, the Company's compliance with legal and regulatory requirements, the Company's systems of internal accounting and financial controls, the independent auditor's engagement, qualifications, performance, compensation and independence, related party transactions, and compliance with the Company's Code of Business Conduct and Ethics.

Each member of the Audit Committee is "independent" as that term is defined under the applicable rules of the Securities and Exchange Commission (the "SEC") and the applicable rules of The NASDAQ Stock Market. The Board has determined that each Audit Committee member has sufficient knowledge in financial and auditing matters to serve on the Committee. The Board determined that Mr. Harris is an "audit committee financial expert," as defined under the applicable rules of the SEC and the applicable rules of The NASDAQ Stock Market. The Company's Board has adopted an Audit Committee Charter, which is available for viewing at www.vyantbio.com.

Item 11. Executive Compensation.

Summary Compensation Table

The following table shows the compensation awarded to or earned by each person serving as the Company's principal executive officer during fiscal year 2022, the Company's two most highly compensated executive officers who were serving as executive officers as of December 31, 2022 and up to two additional individuals for whom disclosure would have been provided but for the fact that such individuals were not serving as an executive officer as of December 31, 2022. The persons listed in the following table are referred to herein as the "named executive officers."

SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($) (1)	Option Awards($) (1)	All Other Compensation($)	Total ($)
John A. Roberts	2022	$450,000	$ -	$ -	$ 52,500	$ 11,447(3)	$ 513,947
Former Chief Executive Officer and President	2021	$422,692(2)	$175,000	$ -	$ 993,972	$ -	$1,591,664
Ralf Brandt (12)	2022	$365,516	$100,000(11)	$ -	$ -	$ 38,148(4)	$ 503,664
Former President, Discovery & Early Development Services	2021	$353,335	$ 50,000	$ -	$ 397,589	$ 42,148(4)	$ 843,072
Andrew D. C. LaFrence	2022	$325,000	$ 70,200	$ -	$ 55,964	$ 12,200(3)	$ 463,264
President and Chief Executive Officer and Chief Financial Officer (5)	2021	$244,212(6)	$ -	$ -	$ 397,589	$ 32,000(10)	$ 673,801
Robert Fremeau	2022	$325,000	$ 70,200	$ -	$ 26,250	$ 7,042(3)	$ 428,492
Chief Scientific Officer (7)	2021	$ 55,167(8)	$ -	$ -	$ 397,615	$ 1,000(9)	$ 453,782

(1) Represents the aggregate grant date fair value for grants made in 2022 and 2021 computed in accordance with FASB ASC Topic 718. This calculation does not give effect to any estimate of forfeitures related to service-based vesting, but assumes that the executive will perform the requisite service for the award to vest in full. The assumptions used in valuing options are described in Note 13 to the Company's financial statements included in this Annual Report on Form 10-K.
(2) Represents Mr. Robert's gross salary of $350,000 through March 31, 2021 and effective with the close of the Merger, $450,000 thereafter. Effective February 3, 2023 Mr. Roberts employment with the Company was terminated.
(3) Represents 401(k) plan company match.
(4) Consists of a monthly housing allowance.
(5) Mr. LaFrence's employment with the Company commenced on March 30, 2021, upon the close of the Merger. Effective February 3, 2023, Mr. LaFrence was also appointed President and Chief Executive Officer.
(6) Represents Mr. LaFrence's $325,000 salary pro-rated after the close of the Merger.
(7) Dr. Fremeau's employment with the Company commenced on October 25, 2021. Effective February 3, 2023 Dr. Fremeau's employment with the Company was terminated.
(8) Represents Dr. Fremeau's $325,000 salary prorated after his commencement of employment on October 25, 2021.
(9) Represents a stipend for healthcare insurance.
(10) Represents payment of pre-Merger deferred compensation to Mr. LaFrence after the close of the Merger.
(11) Represents bonus to Dr. Brandt for the sale of *vivo*Pharm LLC and *vivo*Pharm RDDT.
(12) Dr. Brandt's employment was terminated on December 31, 2022.

Narrative Disclosure to Summary Compensation Table

Employment Agreements

The material terms of each named executive officer's employment agreement or arrangement are described below.

John A. Roberts

On March 30, 2021, the Company entered into an amendment (the "Roberts Amendment") with John A. Roberts to the employment agreement between the Company and Mr. Roberts dated June 27, 2016 (the "Roberts Agreement"). Effective February 3, 2023 Mr. Roberts stepped down as President and Chief Executive Officer and the Roberts Agreement was deemed terminated as of such date without cause. In connection with his separation, Mr. Roberts entered into a separation agreement with the Company effective January 31, 2023, confirming his severance benefits as set forth in the Roberts Agreement as amended by the Roberts Amendment. Pursuant to the Roberts Amendment, (a) Mr. Roberts' salary was increased to $450,000 from the current $350,000; (b) he became eligible for an annual cash bonus of up to 50% of base salary (increased from 35%); (c) he became entitled to a lump sum payment equal to twelve months of his then base salary plus an amount equal to the prior year bonus, and all unvested stock options held by Mr. Roberts vesting in full, in the event his employment is terminated for any reason within twelve months following a change of control; and (d) he became entitled to monthly payments equal to his base salary immediately prior to such termination for a period of twelve months (increased from 6 months) in the event his employment is terminated without "cause" or Mr. Roberts resigns for "good reason" not in connection with a "change of control" (each as defined in the Roberts Agreement). Further, the Roberts Agreement provides for (a) monthly payment equal to his base salary immediately prior to such termination for a period of twelve months in the event his employment is terminated due to illness, injury or disability or (b) a lump sum payment equal to twelve months of his then base salary plus an amount equal to the prior year bonus in the event his employment is terminated for any reason within twelve months following a change of control. The Roberts Agreement further provides that Mr. Roberts will not engage in competitive activity for a period of twelve months following termination of employment.

Ralf Brandt

The Company entered into an employment agreement with Dr. Brandt effective as of August 15, 2017 ("Brandt Agreement"). Dr. Brandt was the President of Discovery & Early Development Services of the Company which included the Company's Hershey, Pennsylvania based subsidiary, *vivo*Pharm, LLC, which was sold by the Company to Reaction Biology Corporation on November 2, 2022. On November 29, 2022, the Company terminated the Brandt Agreement effective December 31, 2022. Dr. Brandt entered into a separation agreement with the Company effective December 31, 2022, confirming his severance benefits as set forth in the Brandt Agreement. The Brandt Agreement provides for, among other things, the following post-termination benefits: (a) any bonus earned under any performance bonus plan then in effect, pro rata for his period of actual employment during the year, payable at the regular bonus payment time but only if other employees are then paid their bonus amounts, (b) a lump sum payment equal to his base salary immediately prior to such termination for the greater of six months or the remainder of his initial two-year employment period in the event his employment is terminated for any reason within twelve months following a "change of control", and (c) such other benefits that Dr. Brandt is entitled to upon his termination as provided for in the Brandt Agreement. The Brandt Agreement further provides that Dr. Brandt will not engage in competitive activity for a period lasting the greater of six months or the remainder of his initial two-year employment period.

Robert Fremeau

The Company has entered into an Employment Agreement with Dr. Fremeau (the "Fremeau Agreement") on October 25, 2021 setting forth his employment as Chief Scientific Officer. Effective February 3, 2023, Dr. Fremeau stepped down as Chief Scientific Officer and the Fremeau Agreement was deemed terminated as of February 3, 2023 by the Company without cause. In connection with his separation, Dr. Fremeau entered into a separation agreement with the Company effective January 31, 2023, confirming his severance benefits as set forth in the Fremeau Agreement. Pursuant to the Fremeau Agreement, Dr. Fremeau is entitled to: (i) an annual base salary of $325,000, or such greater amount as may be determined by the board of directors of the post-merger company from time to time; (ii) eligibility for an annual cash bonus of up to 40% of base salary; and (iii) the following post-termination benefits: (a) payment of all base compensation and bonuses earned and unpaid through the date of termination, (b) payment for all accrued but unused paid time off, (c) payment for any performance bonus plan, then in effect, pro rata for his period of actual employment during the year, payable at a commensurate time as other employees are paid their bonus amounts, (d) in the event of Dr. Fremeau's employment is terminated due to his death, monthly payments to his estate equal to his base salary immediately prior to such termination for a period of 90 days, (e) in the event Dr. Fremeau's employment is terminated due to illness, injury or disability, monthly payments equal to his base salary immediately prior to such termination for a period of six months, (f) monthly payments equal to his base salary immediately prior to termination for a period of nine months in the event his employment is terminated without "cause" or Dr. Fremeau resigns for "good reason" not in connection with a "change of control", plus the greater of the actual prior-year and current-year target bonus times the number of days from the beginning of the current fiscal year through the termination date divided by 365 days, (g) a lump sum payment equal to twelve months of his then base salary plus an amount equal to the prior year bonus, and all unvested stock options held by Dr. Fremeau shall vest in full, in the event his employment is terminated for any reason within twelve months following a change of control, and (h) continuation of medical/dental, disability and life benefits for a period of 12 months following termination of employment pursuant to certain events, subject to Dr. Fremeau's execution of a release of claims, and except to the extent Dr. Fremeau receives comparable benefits from a new employer within 12 months following termination of employment in which case such benefits shall end upon his enrollment in the new employers plans). The Fremeau Agreement provides that Dr. Fremeau is subject to customary non-competition and non-solicitation of employees and customers covenants for twelve months following termination of employment.

Andrew D. C. LaFrence

The Company has entered into an Employment Agreement with Mr. LaFrence (the "LaFrence Agreement") on March 30, 2021 setting forth his employment as Chief Financial Officer. Pursuant to the LaFrence Amendment, Mr. LaFrence: (i) salary was increased to $350,000 from the current $325,000; (ii) eligibility for a cash bonus of $50,000 upon the filing of the Company's 2022 Form 10-K; and $25,000 upon the sale of the Company or winding down of operations (iii) the following post-termination benefits: (a) payment of all base compensation and bonuses earned and unpaid through the date of termination, (b) payment for all accrued but unused paid time off, (c) payment for any performance bonus plan, then in effect, pro rata for his period of actual employment during the year, payable at a commensurate time as other employees are paid their bonus amounts, (d) in the event of Mr. LaFrence's employment is terminated due to his death, monthly payments to his estate equal to his base salary immediately prior to such termination for a period of 90 days, (e) in the event Mr. LaFrence's employment is terminated due to illness, injury or disability, monthly payments equal to his base salary immediately prior to such termination for a period of six months, (f) monthly payments equal to his base salary immediately prior to termination for a period of nine months in the event his employment is terminated without "cause" or Mr. LaFrence resigns for "good reason" not in connection with a "change of control", plus the greater of the actual prior-year and current-year target bonus times the number of days from the beginning of the current fiscal year through the termination date divided by 365 days, (g) a lump sum payment equal to twelve months of his then base salary plus an amount equal to the prior year bonus, and all unvested stock options held by Mr. LaFrence shall vest in full, in the event his employment is terminated for any reason within twelve months following a change of control, and (h) continuation of medical/dental, disability and life benefits for a period of 12 months following termination of employment pursuant to certain events, subject to Mr. LaFrence's execution of a release of claims, and except to the extent Mr. LaFrence receives comparable benefits from a new employer within 12 months following termination of employment in which case such benefits shall end upon his enrollment in the new employers plans). The LaFrence Agreement provides that Mr. LaFrence is subject to customary non-competition and non-solicitation of employees and customers covenants for twelve months following termination of employment.

Outstanding Equity Awards at Fiscal Year End

The following table sets forth certain information, on an award-by-award basis, concerning unexercised options to purchase common stock, restricted shares of common stock and common stock that has not yet vested for each named executive officer and outstanding as of December 31, 2022.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR END - 2022

	Option Awards			
Name	**Number of Securities Underlying Unexercised Options (#) Exercisable**	**Number of Securities Underlying Unexercised Options (#) Unexercisable**	**Option Exercise Price ($)**	**Option Expiration Date**
John A. Roberts	800(1)	-(1)	$ 300.00	7/10/2026
	200(1)	-(1)	$ 375.00	2/21/2027
	21,875(2)	28,125(2)	$ 23.05	3/29/2031
	7,500(4)	22,500(4)	$ 5.00	3/14/2032
Ralf Brandt (6)	666(1)	-(1)	$ 465.42	8/14/2027
	917(3)	83(3)	$ 133.50	5/9/2028
	2,000(1)	-(1)	$ 27.65	1/1/2030
	8,750(2)	11,250(2)	$ 23.05	3/29/2031
Andrew D. C. LaFrence	34,535(1)	-(1)	$ 7.80	5/21/2030
	5,012(5)	2,749(5)	$ 7.80	5/21/2030
	8,750(3)	11,250(2)	$ 23.05	3/29/2031
	5,500(4)	16,500(4)	$ 5.00	3/14/3032
Robert Fremeau (7)	14,583(3)	35,417(3)	$ 12.75	10/24/2031
	3,750(4)	11,250(4)	$ 5.00	3/14/3032

(1) Options are fully vested.
(2) Options vest 25% one year from the grant date and in 36 equal monthly installments thereafter.
(3) 20% of the options vested one year after the grant date, with the remaining options vest in equal monthly installments of 17 options over the next 48 months.
(4) Options vest 25% upon grant and 75% upon the filing of an investigation new drug application for a new chemical entity for Rett Syndrome with the U. S. Food and Drug Administration.
(5) Options were granted to a number of StemoniX employees prior to the Merger and vested based on milestones appropriate for the pre-Merger StemoniX business. On March 4, 2022, the Compensation Committee of the Board of Directors approved a change to vesting criteria for these grants for the StemoniX employees which were based on pre-Merger StemoniX vesting criteria to time-based vesting based on the original grant date of these options, being 25% 1 year (retroactive to the original grant dates in May and July 2020) and the remainder vesting 1/36 per month over the subsequent three years.
(6) On November 29, 2022, the Company terminated the Brandt Agreement effective December 31, 2022.
(7) Effective February 3, 2023 Dr. Fremeau's employment with the Company was terminated.

Director Compensation

Non-Employee Director Compensation Policy

Upon the closing of the Merger on March 30, 2021, the Company amended its Board compensation policy as follows:

Cash Compensation

- each non-employee director receives an annual cash retainer of $30,000 payable in four equal quarterly installments of $7,500 per quarter;
- the chair of the Company's Audit Committee receives an annual quarterly fee of $10,000 payable in four equal installments of $2,500 per quarter;
- the chair of the Company's Compensation Committee receives an annual quarterly fee of $7,500 payable in four equal installments of $1,875 per quarter;
- the chair of the Company's Nominating and Governance Committee receives an annual quarterly fee of $5,000 payable in four equal installments of $1,250 per quarter; and
- each non-employee director is expected to serve on one Board committee and for each incremental Board committee, a Board member received an annual fee of $2,500, payable in equal quarterly installments of $625 per quarter.

Equity Compensation

- Upon initial election to Board: A stock option to acquire the equivalent of $60,000 of common stock of the Company valued on the date of grant, exercisable at fair market value, and vesting in full on the date of grant;
- in the years subsequent the initial stock grant, on March 30 each Director receives an annual restricted stock unit valued at $70,000 which vests on March 30 of the following year; and
- the non-executive chairman receives an annual restricted stock unit grant of the equivalent to $40,000 vesting on the anniversary of the date of the grant.

Except as set forth in the table below, the non-employee directors did not receive any cash or equity compensation during 2022:

DIRECTOR COMPENSATION

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($) (1)	Option Awards ($) (1)	All Other Compensation ($)	Total ($)
John Fletcher	$ 16,251	$ 123,731	$ -	$ -	$ 139,982
Geoffrey Harris	$ 21,251	$ 89,941	$ -	$ -	$ 111,192
Howard McLeod	$ 35,000	$ 68,128	$ -	$ -	$ 103,128
Ping Yeh (3)	$ 22,500	-	$ -	-	$ 22,500
Joanna Horobin	$ 12,001	$ 96,873	$ -	$ -	$ 108,874
Paul Hansen	$ 15,001	$ 83,527	$ -	$ -	$ 98,528
Marcus Boehm (4)	$ -	$ 86,742	$ -	$ -	$ 86,742

(1) Represents the aggregate grant date fair value for grants made in 2022 computed in accordance with FASB ASC Topic 718. This calculation does not give effect to any estimate of forfeitures related to service-based vesting, but assumes that the executive will perform the requisite service for the award to vest in full. The assumptions used in valuing options are described in Note 13 to the Company's financial statements included in this Annual Report on Form 10-K.
(2) Effective with the fourth quarter of 2021, Directors were given the option to receive all or part of their cash fees paid in restricted stock units. Cash fees earned have been reduced for restricted stock units granted in 2022 for fourth quarter 2021 cash fees based on individual director elections.
(3) Mr. Yeh became a non-employee Director in the second quarter of 2022.
(4) Dr. Boehm did not stand for reelection at the 2022 annual meeting. His 2022 stock award therefore did not vest.

Compensation Committee Interlocks and Insider Participation

The Compensation Committee of the Board of Directors is currently composed of the following two non-employee directors: Mr. Harris and Ms. Horobin. None of these Compensation Committee members was an officer or employee of the Company during the year. No Compensation Committee interlocks between the Company and another entity existed.

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

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth certain information as of March 15, 2023 with respect to the beneficial ownership of common stock of the Company by the following: (i) each of the Company's current directors; (ii) each of the named executive officers; (iii) all of the current executive officers and directors as a group; and (iv) each person known by the Company to own beneficially more than five percent (5%) of the outstanding shares of the Company's common stock.

For purposes of the following table, beneficial ownership is determined in accordance with the applicable SEC rules and the information is not necessarily indicative of beneficial ownership for any other purpose. Except as otherwise noted in the footnotes to the table, the Company believes that each person or entity named in the table has sole voting and investment power with respect to all shares of the Company's common stock shown as beneficially owned by that person or entity (or shares such power with his or her spouse). Under the SEC's rules, shares of the Company's common stock issuable under options that are exercisable on or within 60 days after March 22, 2023 ("Presently Exercisable Options") are deemed outstanding and therefore included in the number of shares reported as beneficially owned by a person or entity named in the table and are used to compute the percentage of the common stock beneficially owned by that person or entity. These shares are not, however, deemed outstanding for computing the percentage of the common stock beneficially owned by any other person or entity.

The percentage of the common stock beneficially owned by each person or entity named in the following table is based on 6,267,719 shares of common stock issued and outstanding as of March 15, 2023 plus any shares issuable upon exercise of Presently Exercisable Options held by such person or entity.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Named Executive Officers, Executive Officers and Directors:		
John Fletcher	27,659(1)	*
Geoffrey Harris	14,953(2)	*
Howard McLeod	12,317(3)	*
John A. Roberts	39,399(4)	*
Joanna Horobin	14,737(5)	*
Paul Hanson	149,169(6)	2.38%
Ping Yeh	281,865(7)	4.49%
Andrew LaFrence	68,934(8)	1.09%
Robert Fremeau	20,617(9)	*
All current executive officers and directors as a group (9 persons)	**629,649**	**9.84%**
5% Holders		
The Robert John Petcavich Living Trust	339,886	5.42%
Khejri Pte LTD	354,509(10)	5.65%

(*) Less than 1%.
(1) Includes 4,652 shares of common stock underlying options exercisable and 14,457 restricted stock grants vesting on or before May 15, 2023.
(2) Includes 3,533 shares of common stock underlying options exercisable and 9,726 restricted stock grants vesting on or before May 15, 2023.
(3) Includes 3,533 shares of common stock underlying options exercisable and 8,695 restricted stock grants vesting on or before May 15, 2023.
(4) Includes 31,417 shares of common stock underlying options exercisable on or before May 15, 2023.
(5) Includes 3,615 shares of common stock underlying options exercisable and 10,054 restricted stock grants vesting on or before May 15, 2023.
(6) Includes 2,603 shares of common stock underlying options exercisable and 9,423 restricted stock grants vesting on or before May 15, 2023.
(7) Includes 265,624 shares of common stock owned by the Yung-Ping Yeh Revocable Trust, 7,546 shares of common stock underlying options exercisable and 8,695 restricted stock grants vesting on or before May 15, 2023.
(8) Includes 12,823 common shares owned by the Trust Agreement of Andrew David Chapman LaFrence and Kimberly Ann Chapman LaFrence dated August 11, 2017, and 56,111 shares of common stock underlying options exercisable on or before May 15, 2023.
(9) Includes 20,417 shares of common stock underlying options exercisable on or before May 15, 2023.
(10) Includes 3,104 shares of common stock underlying options exercisable on or before May 15, 2023 by Sriram Nadathur, a beneficial owner of Khejri Pte LTD.

Equity Compensation Plan Information

Effective with the Merger, the Vyant Bio 2021 Equity Incentive Plan (the "2021 Plan") came into effect, pursuant to which the Company's Board of Directors may grant up to 900,000 of equity-based instruments to officers, key employees, and non-employee consultants. The following table provides information as of December 31, 2022 regarding shares of the Company's common stock that may be issued under (i) the two legacy equity incentive plans: the Cancer Genetics Inc. 2011 Equity Incentive Plan (the "2011 Plan"), and the StemoniX Inc. 2015 Stock Option Plan (the "2015 Plan", and together with the 2011 Plan, the "Frozen Stock Option Plans") and (ii) the 2021 Plan.

	Equity Compensation Plan Information		
Plan Category	**(a) Number of securities to be issued upon exercise of outstanding options and rights (1)**	**(b) Weighted average exercise price of outstanding options and rights**	**(c) Number of securities remaining available for future issuance under equity compensation plan (excluding securities referenced in column (a))**
Equity compensation plans approved by security holders (2)	428,301	$ 14.97(3)	391,163(4)

(1) Does not include any restricted stock as such shares are already reflected in the Company's outstanding shares, does include 78,801 restricted stock units outstanding as of December 31, 2022.
(2) Consists of the 2011 Plan, the 2015 Plan and the 2021 Plan.
(3) The weighted-average exercise price does not reflect the shares that will be issued in connection with the settlement of RSUs, since RSUs have no exercise price.
(4) Includes securities available for future issuance under the 2021 Plan. The Company is no longer able to issue securities from the 2011 Plan and the 2015 Plan.

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

Other than compensation arrangements for named executive officers and directors, the Company describes below each transaction and series of similar transactions, since the beginning of fiscal year 2022, to which the Company were a party or will be a party, in which:

- the amounts involved exceeded or will exceed the lesser of $120,000 or one percent of the average of the smaller reporting company's total assets at year-end for the last two completed fiscal years; and
- any of the Company's directors, nominees for director, executive officers or holders of more than 5% of the Company's common stock, or any member of the immediate family of the foregoing persons, had or will have a direct or indirect material interest.

The Company raised approximately $3.9 million from the sale of 2020 Convertible Notes from January 1, 2021 through March 12, 2021 from the following related parties: FOD Capital ($3.6 million); Mr. Hansen ($325 thousand) and Mr. Yeh ($7 thousand). FOD Capital also received a warrant in connection with their investment which upon the close of the Merger was exchanged for a warrant to purchase 28,778 shares of the Company's common stock at an exercise price of $29.5295 per share.

During the fourth quarter of 2021, the Company paid a third-party collaboration partner $89 thousand as a reimbursement of third-party costs incurred by the collaborator in connection with the collaboration arrangement. In September 2021, Mr. LaFrence's son became an employee of this collaborator. Separately, in the fourth quarter of 2021, the Company entered into a $60 thousand consulting agreement with this third-party collaborator. The arrangements with this third-party collaborator had arms-length fair value terms.

On December 30, 2022, *vivo*Pharm, entered into a Share Purchase Agreement (the "Share Agreement") with Sabine Brandt as trustee for the Brandt Family Trust ("Buyer"), pursuant to which *vivo*Pharm sold the entirety of the Company's remaining *vivo*Pharm business for early discovery services, represented by 100% of the outstanding shares of (i) of RDDT a *vivo*Pharm Company Pty Ltd; and (ii) *vivo*Pharm Europe Ltd, to Buyer in exchange for a nominal cash amount, subject to adjustments for closing cash and accounts payable, on and subject to the terms and conditions set forth therein (the "Second Transaction"). The Second Transaction resulted in the Company delivering target closing cash as part of the sold entities of approximately $827,000 and the assumption by Buyer of liabilities of the sold entities aggregating to approximately $2.2 million. The Second Transaction was consummated effective December 31, 2022. Dr. Brandt was an officer of the Company until December 31, 2021 and Mrs. Brandt was employed by *vivo*Pharm Pty Ltd a subsidiary of Vyant Bio.

To complete the disposition of the Company's former *vivo*Pharm business and to resolve certain issues that have arisen with the Buyer, on March 13, 2023, the Company sold *vivo*Pharm to the Buyer for a nominal sum. As part of the sale of *vivo*Pharm to Buyer, the Company is assuring that *vivo*Pharm has cash of at least $200,000 and the Company is assuming certain specific *vivo*Pharm liabilities, principally liabilities directly associated with the proposed Phase 2 Donepezil clinical trial in Australia (which the Company has placed on hold as it evaluates its strategic alternatives) and *vivo*Pharm tax liabilities through closing. The Transaction was consummated effective March 13, 2023.

Compensation arrangements for the Company's named executive officers and directors are described in the section entitled "Executive Compensation".

Indemnification Agreements

The Company has entered into indemnification agreements with each of its current directors and executive officers. These agreements will require the Company to indemnify these individuals to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to the Company, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. The Company also intends to enter into indemnification agreements with its future directors and executive officers.

Policies and Procedures for Related Party Transactions

The Company adopted a policy that its executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of any class of the Company's common stock, any members of the immediate family of any of the foregoing persons and any firms, corporations or other entities in which any of the foregoing persons is employed or is a partner or principal or in a similar position or in which such person has a 5% or greater beneficial ownership interest (collectively, "related parties") are not permitted to enter into a transaction with the Company without the prior consent of the Company's board of directors acting through the audit committee or, in certain circumstances, the chairman of the audit committee. Any request for the Company to enter into a transaction with a related party, in which such related party would have a direct or indirect interest in the transaction, must first be presented to the Company's audit committee, or in certain circumstances the chairman of the Company's audit committee, for review, consideration and approval. In approving or rejecting any such proposal, the Company's audit committee is to consider the material facts of the transaction, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances, the extent of the benefits to us, the availability of other sources of comparable products or services and the extent of the related person's interest in the transaction.

Director Independence

The Company is currently managed by a seven-member board of directors. All of the Company's current directors except Mr. Roberts and Mr. Yeh are "independent" as that term is defined under the rules of The NASDAQ Stock Market.

Item 14. Principal Accounting Fees and Services.

The following table summarizes the fees for professional services rendered by Deloitte & Touche LLP, the Company's independent registered public accounting firms, for each of the respective last two fiscal years:

Fee Category	2022	2021
Audit Fees	$ 689,015	$ 569,234
Audit-Related Fees	100,750	40,000
Tax Fees	-	-
	$ 789,765	$ 609,234

Audit Fees

Represents fees for professional services provided in connection with the audit of the Company's annual financial statements and reviews of the Company's quarterly interim financial statements.

Audit-Related Fees

Fees related to review of registration statements, acquisition due diligence and statutory audits.

Tax Fees

The Audit Committee is responsible for appointing, setting compensation and overseeing the work of the independent auditors. The Audit Committee is required to review and approve the proposed retention of independent auditors to perform any proposed auditing and non-auditing services as outlined in its charter. The Audit Committee has established policies and procedures separate from its charter concerning the pre-approval of auditing and non-auditing related services. As required by Section 10A of the Exchange Act, our Audit Committee has authorized all auditing and non-auditing services provided by Deloitte & Touche LLP during 2022 and 2021 and the fees paid for such services. However, the pre-approval requirement may be waived with respect to the provision of non-audit services for the Company if the "de minimis" provisions of Section 10A(i)(1)(B) of the Exchange Act are satisfied.

The Audit Committee has considered whether the provision of Audit-Related Fees, Tax Fees, and all other fees as described above is compatible with maintaining Deloitte & Touche LLP's independence and has determined that such services for fiscal years 2022 and 2021 were compatible. All such services were approved by the Audit Committee pursuant to Rule 2-01 of Regulation S-X under the Exchange Act to the extent that rule was applicable.

The Audit Committee is responsible for reviewing and discussing the audit financial statements with management, discussing with the independent registered public accountants the matters required by Public Company Accounting Oversight Board Auditing Standard No. 1301 *Communications with Audit Committees*, receiving written disclosures from the independent registered public accountants required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accountants' communications with the Audit Committee concerning independence and discussing with the independent registered public accountants their independence, and recommending to the Board that the audit financial statements be included in the Company's Annual Report on Form 10-K.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a)(1) *Financial Statements*. The financial statements filed as part of this report are listed on the Index to the Consolidated Financial Statements.

(a)(2) *Financial Statement Schedules*. Schedules are omitted because they are not applicable or the required information is shown in the consolidated financial statements or notes thereto.

(a)(3) *Exhibits.* Reference is made to the Exhibit Index. The exhibits are included, or incorporated by reference, in this annual report on Form 10-K and are numbered in accordance with Item 601 of Regulation S-K.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Vyant Bio, Inc.
(Registrant)

Date: March 31, 2023

/s/ Andrew D. C. LaFrence

Andrew D. C. LaFrence
President and Chief Executive Officer and Chief Financial Officer
(Principal Executive Officer, Principal Financial, Accounting Officer and duly authorized signatory)

SIGNATURES AND POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Andrew D. C. LaFrence, his true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments to this annual report on Form 10-K together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith and, (iii) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act, this annual report on Form 10-K has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Andrew D. C. LaFrence Andrew D.C. LaFrence	President, Chief Executive Officer and Chief Financial Officer *(Principal Executive Officer, Principal Financial and Accounting Officer)*	March 31, 2023
/s/ John Fletcher John Fletcher	Chairman of the Board of Directors	March 31, 2023
/s/ John A. Roberts John A. Roberts	Director	March 31, 2023
/s/ Geoffrey Harris Geoffrey Harris	Director	March 31, 2023
/s/ Yung-Ping Yeh Yung-Ping Yeh	Director	March 31, 2023
/s/ Howard McLeod Howard McLeod	Director	March 31, 2023
/s/ Joanna Horobin Joanna Horobin	Director	March 31, 2023
/s/ Paul Hansen Paul Hansen	Director	March 31, 2023

INDEX TO EXHIBITS

Exhibit No.	Description
2.1#	Stock Purchase Agreement, dated as of August 14, 2017, by and among the Company, the Trustee of The Brandt Family Trust, a trust organized under the laws of Australia, Sabine Brandt, Royal Melbourne Institute of Technology, South Australian Life Science Advancement Partnership, LP, *vivo*Pharm Pty Ltd, Dr. Ralf Brandt, as Shareholders' Representative and the Management Parties party thereto (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 16, 2017).
2.2#	Agreement and Plan of Merger and Reorganization, by and among Cancer Genetics, Inc., StemoniX, Inc., and CGI Acquisition, Inc., dated August 21, 2020 (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 24, 2020).
2.3#	Amendment No. 1 to Agreement and Plan of Merger and Reorganization, by and among Cancer Genetics, Inc., StemoniX, Inc., and CGI Acquisition, Inc., dated February 8, 2021 (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 8, 2021).
2.4#	Amendment No. 2 to Agreement and Plan of Merger and Reorganization, by and among Cancer Genetics, Inc., StemoniX, Inc., and CGI Acquisition, Inc., dated February 26, 2021 (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 26, 2021).
2.5#	Share Purchase Agreement, dated December 30, 2022, by and between *vivo*Pharm Pty, Ltd. and Sabine Brandt as trustee for the Brandt Family Trust (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 5, 2023).
2.6#	Equity Purchase Agreement, dated November 2, 2022 by and among Vyant Bio, Inc., Reaction Biology Corporation and *vivo*Pharm Pty, Ltd. (incorporated by reference to Exhibit 2.01 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on November 3, 2022).
2.7#	Share Purchase Agreement, dated December 30, 2022, by and between vivoPharm Pty, Ltd. and Sabine Brandt as trustee for the Brandt Family Trust (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 5, 2023).
2.8#	Share Purchase Agreement, dated March 13, 2023, by and between Vyant Bio, Inc. and Sabine Brandt as trustee for the Brandt Family Trust (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 15, 2023).
3.1	Fourth Amended and Restated Certificate of Incorporation of Cancer Genetics, Inc. (incorporated by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 15, 2013).
3.2	Amendment to Certificate of Incorporation of the Company related to the Name Change (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
3.3	Amendment of Certificate of Incorporation, as amended, of Vyant Bio, Inc., dated November 1, 2022 (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on November 2, 2022).

Exhibit No	Description
3.4	Amended and Restated Bylaws of Cancer Genetics, Inc. (incorporated by reference to Exhibit 3.4 of the Company's Registration Statement on Form S-1/A (File No. 333-178836), filed with the Securities and Exchange Commission on April 30, 2012).
3.5	Amendment to Amended and Restated Bylaws of Vyant Bio, Inc., dated December 16, 2022 (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on December 19, 2022).
4.1	Specimen Common Stock certificate of Cancer Genetics, Inc. (incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1/A (File No. 333-178836), filed with the Securities and Exchange Commission on May 16, 2012).
4.2	Form of October 2012 Warrant issued by Cancer Genetics, Inc. to John Pappajohn and Mark Oman (incorporated by reference to Exhibit 10.53 to the Company's Registration Statement on Form S-1/A (File No. 333-178836), filed with the Securities and Exchange Commission on October 23, 2012).
4.3	Registration Rights Agreement, dated as of August 14, 2017, by and between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 16, 2017).
4.4	Omnibus Warrant Amendment to Warrant Issued to Lenders, dated as of June 30, 2018 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 5, 2018).
4.5	Form of Underwriter Warrants of Cancer Genetics, Inc. (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 10, 2019).
4.6	Form of Placement Agent Warrants of Cancer Genetics, Inc. (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 29, 2019).
4.7*	Description of Securities.

Exhibit No.	Description
4.8	Form of Underwriter Warrants of Cancer Genetics, Inc., dated November 2, 2020 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on November 2, 2020).
4.9	Form of Common Warrant dated February 1, 2021 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 1, 2021).
4.10	Form of Placement Agent Warrant dated February 1, 2021 (incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 1, 2021).
4.11	Warrant dated February 16, 2021 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 16, 2021).
4.12	Form of Exchange Warrant dated March 30, 2021 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
10.1†	Amended and Restated 2008 Stock Option Plan (incorporated by reference to Exhibit 10.1 of the Company's Registration Statement on Form S-1/A (File No. 333-178836), filed with the Securities and Exchange Commission on October 23, 2012).
10.2†	Form of Notice of Stock Option Grant under 2008 Stock Option Plan (incorporated by reference to Exhibit 10.2 of the Company's Registration Statement on Form S-1 (File No. 333-178836), filed with the Securities and Exchange Commission on December 30, 2011).
10.3†	Form of Stock Option Grant Agreement under 2008 Stock Option Plan (incorporated by reference to Exhibit 10.3 of the Company's Registration Statement on Form S-1 (File No. 333-178836), filed with the Securities and Exchange Commission on December 30, 2011).
10.4†	Form of Exercise Notice and Restricted Stock Purchase Agreement under 2008 Stock Option Plan (incorporated by reference to Exhibit 10.4 of the Company's Registration Statement on Form S-1 (File No. 333-178836), filed with the Securities and Exchange Commission on December 30, 2011).
10.5†	Form of Stock Option Grant Agreement under 2011 Stock Option Plan (incorporated by reference to Exhibit 10.5 of the Company's Registration Statement on Form S-1 (File No. 333-178836), filed with the Securities and Exchange Commission on December 30, 2011).
10.6†	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.7 of the Company's Registration Statement on Form S-1 (File No. 333-178836), filed with the Securities and Exchange Commission on December 30, 2011).

Exhibit No.	Description
10.7	Restated Registration Rights Agreement, between Cancer Genetics, Inc., Mark Oman and John Pappajohn, dated October 17, 2012 (incorporated by reference to Exhibit 10.54 of the Company's Registration Statement on Form S-1/A (File No. 333-178836), filed with the Securities and Exchange Commission on October 23, 2012).
10.8†	2011 Equity Incentive Plan, as amended and restated effective May 14, 2015 (incorporated by reference to Exhibit 10.1 of the Company's Registration Statement on Form S-8 (File No. 333-205903), filed with the Securities and Exchange Commission on July 28, 2015).
10.9†	Employment Agreement of John Roberts, dated June 27, 2016 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on June 30, 2016).
10.10†	Amendment, dated as of October 11, 2016, to Amended and Restated Cancer Genetics, Inc. 2011 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's current report on Form 8-K, filed with the Securities and Exchange Commission on October 12, 2016).
10.11	Form of Warrant issued to lenders dated March 22, 2017 (incorporated by reference to Exhibit 10.83 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 23, 2017).
10.12	Common Stock Purchase Agreement, dated as of August 14, 2017, by and between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 16, 2017).
10.13†	Employment Agreement with Ralf Brandt, dated August 15, 2017 (incorporated by reference to Exhibit 10.81 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on April 16, 2019).
10.14	Form of Securities Purchase Agreement dated January 28, 2021 (incorporated by reference to Exhibit 10.1 the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 1, 2021).
10.15	Form of Registration Rights Agreement dated January 28, 2021 (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 1, 2021).
10.16	Form of Warrant Exchange and Amendment Agreement, dated as of November 20, 2020, by and between Cancer Genetics, Inc. and the Holders (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on November 20, 2020).
10.17	Form of Securities Purchase Agreement dated February 10, 2021 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 16, 2021).

Exhibit No.	Description
10.18†	Vyant Bio, Inc. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
10.19†	Form of Incentive Stock Option Grant Agreement (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
10.20†	Form of Nonqualified Stock Option Grant Agreement (incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
10.21†	Form of Stock Unit Award Agreement (incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
10.22†	Employment Agreement, dated March 30, 2021, between the Company and Yung-Ping Yeh (incorporated by reference to Exhibit 10.5 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
10.23†	Employment Agreement, dated March 30, 2021, between the Company and Andrew D. C. LaFrence (incorporated by reference to Exhibit 10.6 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
10.24†	Amendment No. 1 to Employment Agreement, dated March 30, 2021, between the Company and John A. Roberts (incorporated by reference to Exhibit 10.7 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 5, 2021).
10.25†	Employment Agreement, dated October 25, 2021, between the Company and Robert Fremeau (incorporated by reference to Exhibit 10.25 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 30, 2022).
10.25***	Research and Collaboration Agreement dated November 27, 2019 by and among Atomwise Inc., Atomwise-StemoniX JV1, LLC, and StemoniX, Inc. (incorporated by reference to Exhibit 10.41 of the Company's Registration Statement on Form S-4/A (File No. 333-249513), filed with the Securities and Exchange Commission on February 8, 2021).
10.26	Limited Liability Company Agreement of Atomwise-StemoniX JV1, LLC dated November 27, 2019 by and among Atomwise-StemoniX JV1, LLC, Atomwise Inc., StemoniX, Inc. (among other parties) (incorporated by reference to Exhibit 10.42 of the Company's Registration Statement on Form S-4/A (File No. 333-249513), filed with the Securities and Exchange Commission on February 8, 2021).
10.27***	Amended and Restated Non-Exclusive License Agreement dated April 1. 2017 as amended, by and between iPS Academia Japan, Inc. and StemoniX, Inc. (incorporated by to Exhibit 10.43 of the Company's Registration Statement on Form S-4/A (File No. 333-249513), filed with the Securities and Exchange Commission on February 8, 2021).

Exhibit No.	Description
10.28***	Non-Exclusive License Agreement dated January 29, 2016 by and between ID Pharma Co., Ltd. and the Company (incorporated by reference to Exhibit 10.44 of the Company's Registration Statement on Form S-4/A (File No. 333-249513), filed with the Securities and Exchange Commission on February 8, 2021).
10.29†	StemoniX, Inc. 2015 Stock Option Plan, as amended (incorporated by reference to Exhibit 99.2 of the Company's Registration Statement on Form S-8 (File No. 333-256225), filed with the Securities and Exchange Commission on May 18, 2021).
10.30	Lease Agreement dated January 7, 2022 by and between StemoniX, Inc. and Nancy Ridge Technology Center, L.P. (incorporated by reference to Exhibit 10.30 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 30, 2022).
10.31	Lease Agreement dated July 17, 2017 by and between StemoniX, Inc. and WBL Properties 1 LLC (incorporated by reference to Exhibit 10.31 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 30, 2022).
10.32	First Amendment to Lease dated August 10, 2020 by and between StemoniX, Inc. and WBL Properties 1 LLC (incorporated by reference to Exhibit 10.32 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 30, 2022).
10.33	Second Amendment to Lease dated September 29, 2020 by and between StemoniX, Inc. and WBL Properties 1 LLC (incorporated by reference to Exhibit 10.33 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 30, 2022).
10.34	Purchase Agreement dated March 28, 2022 between Lincoln Park Capital, LLC and Vyant Bio, Inc (incorporated by reference to Exhibit 10.34 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 30, 2022).
10.35	Registration Rights Agreement dated March 28, 2022 between Lincoln Park Capital, LLC and Vyant Bio, Inc (incorporated by reference to Exhibit 10.35 of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 30, 2022).
10.36	Equity Distribution Agreement, dated April 8, 2022, by and between Vyant Bio, Inc. and Canaccord Genuity LLC (incorporated by reference to Exhibit 1.1 of the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 11, 2022).
21.1*	List of Subsidiaries
24.1*	Power of attorney (included on the signature page).

Exhibit No.	Description
31.1*	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities and Exchange Act of 1934, as amended.
31.2*	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities and Exchange Act of 1934, as amended.
32.1**	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	Inline XBRL Instance Document-the instance document does not appear in the Interactive Data File as its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document.
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104*	Cover Page Interactive Data File-the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.

* Filed herewith.
** Furnished herewith.
***Portions of the exhibit have been omitted pursuant to Item 601(b)(10) of Regulation S-K. A copy of any omitted portions will be furnished to the Securities and Exchange Commission upon request.
† Indicates a management contract or compensation plan, contract or arrangement.
# Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. VYNT hereby undertakes to furnish supplementally copies of any of the omitted schedules upon request by the SEC.