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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2021

Or

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

For the transition period from to

Commission file number 001-35817

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. ☐

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 $80.7 million on June 30, 2021, the last business day of the registrant's most recently completed second fiscal quarter, based on the closing price of $3.03 on that date.

Indicate the number of shares outstanding of each of the registrant's classes of common equity, as of March 15, 2022:

Class	**Number of Shares**
Common Stock, $.0001 par value	28,998,169

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 strategic plans;
- our ability to discover and develop novel therapeutics;
- our ability to license any therapeutics we develop to larger companies;
- the ability of our licensees to achieve milestones under future licensing agreements that will generate revenue for us;
- our ability to secure strategic and clinical co-development partnerships with pharmaceutical and biotechnology companies;
- our ability to make capital expenditures and to finance operations;
- our cash position;
- our ability to effectively manage current and future collaboration partnerships, joint venture or acquisition initiatives undertaken by the Company;
- our ability to develop and build infrastructure and teams to manage our research and development, partnering and clinical development activities;
- our ability to continue to retain and hire key talent;
- our ability to sell the *vivo*Pharm business and effectively operate the business during the sales process;
- our ability to deter cyberattacks on our business;
- our ability to obtain compounds used for drug discovery and development could be affected as a result of the tensions between Ukraine and Russia; 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"), 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.

In December 2021, the Company's Board of Directors approved a plan to sell the *vivo*Pharm Pty Ltd ("*vivo*Pharm") business to allow the Company to focus on the development of neurological developmental and degenerative disease therapeutics. We engaged an investment banker in December 2021 to sell the *vivo*Pharm business before the end of 2022.

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 the historical accounts of StemoniX. The excess of purchase price consideration over the fair values of the identifiable net assets was 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 11,007,186 shares of Common Stock or $50.74 million, 2,157,686 Common Stock warrants or $9.04 million and 55,907 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 804,711 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.

***vivo*Pharm Business**

*vivo*Pharm has 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 offers 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 range from early compound selection to developing comprehensive sets of in vitro and in vivo data, as needed for investigational new drug ("IND") applications as required by regulatory bodies, such as the United States Food and Drug Administration ("FDA"), the European Medicines Agency ("MEA") and Therapeutic Goods Administration ("TGA") in Australia. *vivo*Pharm's current discovery services include preclinical anti-tumor efficacy, good laboratory practice ("GLP") compliant toxicity studies and small and bio-molecule analytical services. *vivo*Pharm provides 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 enables it to access global market opportunities. *vivo*Pharm's headquarters in Australia specializes in safety and toxicology studies, including mammalian, genetic and in vitro, along with bioanalytical services including immune-analytical capabilities. *vivo*Pharm operates 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 focuses on screening and efficacy testing for a wide range of pharmaceutical and chemical products. The third location, in Munich, Germany, hosts project management and business development personnel for the European customers.

As of December 31, 2021, the Company has accounted 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.

Business Strategy

Drug Discovery

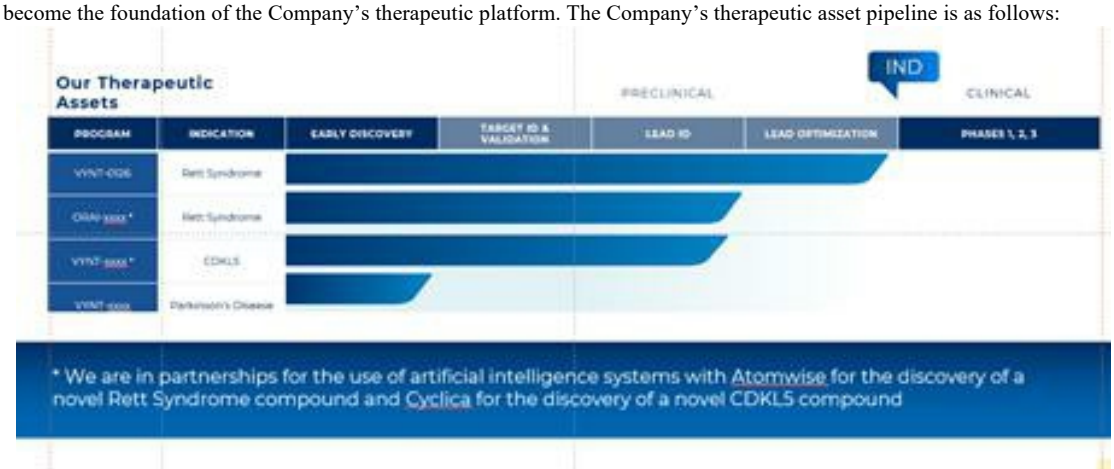
The Company's strategy is to continue building a unique and robust "human-first" drug discovery platform to discover repurposed and novel therapeutics to treat neurodevelopmental and neurodegenerative diseases, initially focusing on rare CNS genetic disorders including Rett, CDD and familial PD. Key to the Company's strategy is the development and continued enhancement of specialized disease models 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 t 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 with greater degrees of confidence and, ultimately, reduce the cost of discovering new therapeutic agents. The Company's strategy is to strive to file two IND applications with the FDA starting in 2023. The Company intends to license its therapeutic candidates to third parties before or after Phase I clinical trials for subsequent clinical development and receive a mixture of upfront payments, licensing fees, milestone-based fees, and ongoing royalty payments.

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 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 is expected to be completed in the second half of 2022. 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. The Company anticipates revenue generated from these activities will substantially cease in the first half of 2022 as the Company plans to use those resources to support its internal disease model and therapeutic drug development. The Company is also exploring potential opportunities to out-license access to its proprietary iPSC technologies to be used by pharmaceutical and biotechnology companies in their internal drug discovery programs.

Therapeutic Programs

The Company is actively seeking to discover repurposed and novel (New Chemical Entity, or "NCE") lead candidates for Rett, CDD and familial PD which will become the foundation of the Company's therapeutic platform. The Company's therapeutic asset pipeline is as follows:



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.

The Company currently has 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: a repurposing candidate (VYNT0126) and several novel compounds.

The VYNT0126 molecule is a promising repurposed candidate for several reasons. The compound has already been approved by the FDA as a cognition-enhancing medication for dementia related to Alzheimer's disease, and there is readily available safety data. VYNT0126 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 is also pursuing novel compounds for Rett identified in the SMART screen in collaboration with Atomwise (as described below). We are applying machine learning to drive compound progression and we expect to complete our hit-to-lead optimization efforts in 2022 and commence IND-enabling studies in the first half of 2023.

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 are 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 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

Joint Venture

Atomwise Joint Venture

On December 3, 2019, StemoniX announced a non-exclusive joint venture with Atomwise, Inc., 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. StemoniX is currently testing the compounds on its human microBrain 3D disease model to determine biological activity. We believe this joint effort will 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.

Ordaos Collaboration

We had a collaboration to design and qualify biomarker-specific small protein therapeutics in an arrangement that included Ordaos' generative AI technology to accelerate and optimize small protein (50 to 100 amino acids) drug discovery and development processes. In this collaboration, Ordaos provided a pipeline of digitally optimized therapeutics for further development. Preliminary data from newly-designed optimized proteins indicates the design parameters generated an improved class of proteins that were sufficient to predict ELISA EC50 binding in nanomolar ("nM") range. We are working together to further optimize proteins for future drug development.

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 are currently 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.

OrganoTherapeutics Collaboration

On March 29, 2022, we announced a collaboration with OrganoTherapeutics to advance our work on the identification of lead compounds to address the complexities of Parkinson's Disease, with our initial focus on the GBA and LRRK2 familial mutations. Haploinsufficiency of the GBA gene which makes the enzyme glucocerebrosidase is the most common genetic mutation that causes PD. People with PD who have the GBA mutation tend to experience motor symptom deficits sooner, cognitive decline more rapidly and have particular difficulty with their gait and postural balance.

NIH Collaboration

In April 2019, the National Center for the Advancement of Translational Sciences ("NCATS"), the institute charged with finding better technology models for the National Institutes of Health ("NIH"), and StemoniX entered into a Research Collaboration Agreement ("RCA"). The RCA is part of the HEAL (Helping to End Addiction Long-Term) Initiative, a multi-institute effort to fight the opioid epidemic, and screening of over 300 compounds has been completed. The analysis by the NIH was supported with AnalytiX, described above, and provided an unbiased and deep analysis of the microBrain waveforms. The resulting output was developed into a joint publication that demonstrated how the Company's neural platform responds across a wide range of chemicals and drugs and can be used to separate different mechanisms of action. More importantly, the joint project validated a high-throughput, human-based platform for further insight into drug action and provided a foundation for future drug development that would treat pain without opioids with a goal of combatting the opioid crisis.

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) 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 12 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	
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	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, microKidney, microNerve, microLiver, microTumor, microPancreas, BeYourCure, Person-on-a-Plate, Clinical Trial on-a-Plate, and microOrgan VyantBio, Vyant Bio, and Human-powered and the following pending trademark application: Biological Intelligence. In addition, the Company claims common law trademark rights with respect to the mark AnalytiX.

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

Sales and Marketing

We have and 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.

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 ND sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data, to 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 FDA, unless 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 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 FDA as part of the IND, and timely safety reports must be submitted to 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.

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, 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 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 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 FDA, and written IND safety reports must be submitted to 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 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.

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"), 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 FDA because FDA has approximately two months to make a "filing" decision after the application is submitted. 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. 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.

FDA may refer an application for a new drug to an advisory committee within 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. 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, FDA will also inspect the facility where the product is manufactured. 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, 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 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, 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 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. 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 FDA approval, the approval may be limited to specific diseases and dosages, which could restrict the commercial value of the product. In addition, 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. 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 FDA concludes a REMS is needed, the sponsor of the NDA must submit a proposed REMS. 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, 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 FDA review and approval. Manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with FDA and certain state agencies and are subject to periodic unannounced inspections by 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 FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the drug, providing FDA with updated safety and efficacy information, drug sampling and distribution requirements, complying with certain electronic records and signature requirements, and complying with FDA promotion and advertising requirements. 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. 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, 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, 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. 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. 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.

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, 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, FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Orphan drug designation

Under the Orphan Drug Act, 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 FDA grants orphan designation, the identity of the therapeutic agent and its potential orphan use are publicly disclosed by 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 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 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 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. However, since the Company currently has three employees located in the EU, its processing and transfer for employee Personal Data is 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

In December 2021, the Company's Board of Directors approved a plan to sell the *vivo*Pharm business to focus the Company on the development of neurological developmental and degenerative disease therapeutics. As noted in Note 3 to the Company's Consolidated Financial Statements contained in Part II. Item 8 herein, we have accounted for the *vivo*Pharm business as discontinuing operations as of December 31, 2021. We plan to sell the *vivo*Pharm business during 2022.

Overview - vivoPharm

*vivo*Pharm offers preclinical services such as predictive tumor models, human orthotopic xenografts and syngeneic immuno-oncology relevant tumor models in its Hershey, PA facility, and is a leader in the field of immuno-oncology preclinical services and orthotopic predictive models. This service is supplemented with GLP toxicology and extended bioanalytical services in the Company's Australian-based facilities in Melbourne, Victoria, and Adelaide, South Australia.

The *vivo*Pharm business is based on demand for preclinical and discovery services from biotechnology and pharmaceutical companies, academia and the research community. Biotechnology and pharmaceutical companies engaged in drug development with the desire to run clinical trials to determine the safety and effectiveness of treatments and therapeutics continuously benefit from its services. *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 as a specialized service offering in the immuno-oncology space.

*vivo*Pharm has developed industry recognized capabilities in early phase development and discovery, especially in immuno-oncology models, tumor micro-environment studies, and specialized pharmacology services that support basic discovery, preclinical and phase 1 clinical trials. *vivo*Pharm's studies have been utilized to support over 300 IND submissions to date across a range of therapeutic indications, including lymphomas, leukemia, breast cancer, GI-cancers, liver cancer, pancreatic cancer, non-small cell lung cancer, and other non-cancer rare diseases. *vivo*Pharm is presently serving over 50 biotechnology and pharmaceutical companies across four continents in over 100 studies and trials with highly specialized development, clinical and preclinical research. Over the past 18 years, *vivo*Pharm has also generated an extensive library of human xenograft and syngeneic tumor models, including subcutaneous, orthotopic and metastatic models. *vivo*Pharm offers its expertise in small and bio-molecules.

*vivo*Pharm continues to leverage its international presence to access global market opportunities. *vivo*Pharm's headquarters in Australia specializes in safety and toxicology studies, including mammalian, genetic and in vitro, along with bioanalytical services including immune-analytical capabilities. *vivo*Pharm operates from multiple locations in Victoria and South Australia. *vivo*Pharm's U.S.-based laboratory, located at the Hershey Center for Applied Research in Hershey, Pennsylvania, primarily focuses on screening and efficacy testing for a wide range of pharmaceutical and chemical products. The third location, in Munich, Germany, hosts project management and business development personnel.

***vivo*Pharm Market Overview**

United States Clinical Oncology Market Overview

Despite many advances in the treatment of cancer, it remains one of the greatest areas of unmet medical need. In 2021, the World Health Organization attributed 10 million deaths globally to cancer, which prior to the COVID-19 was approximately about 1 in 6 deaths. Within the United States, excluding COVID-19 related deaths, cancer is the second most common cause of death, exceeded only by heart disease, accounting for nearly one out of every four deaths.

United States and International Clinical Trials Market Overview

The global preclinical Contract Research Organization ("CRO") market size was valued at $4.5 billion in 2020 and is expected to grow at a compound annual growth rate ("CAGR") of 8.1% from 2021 to 2028. Increased R&D budget for drug development is leading to rising demand for preclinical CRO services, thus boosting the market growth during the forecast period, according to a September 2021 report published by Grand View Research, Inc. Outside of the United States, growth in the pharmaceuticals and clinical trials market is continuing, and trials are increasingly becoming more complex. Growth in the European pharma market is anticipated to be driven largely by the United Kingdom, Germany, Spain, France

and Italy.

While oncology drugs have the potential to be among the most personalized therapeutics, very few successfully make it to market. The application of pharmacogenomics to oncology clinical trials enables researchers to better predict differences, initially driven by data derived in preclinical research. The Company believes a growing demand for faster development of personalized medicines and more effective clinical trials are growth drivers of this market, and its core expertise is preclinical efficacy, toxicity and bioanalytical services.

*vivo*Pharm has a particularly strong set of experiences working in the preclinical area of checkpoint inhibitors and specifically immunotherapies. Drug development is continuing to attract biotech companies transforming scientific innovation into practice-changing cancer drugs, thereby driving demand for *vivo*Pharm's services. When considering druggable targets within the different immuno-oncology drug classes, T cell immunomodulators and cell therapies had the largest increase in new targets in the past 2 years, which suggests that more innovation is going into these drug classes than the other immune-oncology drug classes.

*vivo*Pharm is currently focused on delivering its pre-clinical CRO and drug discovery services to a diverse group of market participants, including biotechnology and pharmaceutical companies; governmental agencies; and academic research centers. These participants require syngeneic and xenograft tumor models to support the development of novel biomarkers and increasing technological expertise to collect key data sets for their clinical trials, understand and manage therapeutic development and design customized therapy choices. *vivo*Pharm believes that its approach to rapidly translate research insights about the genetics and molecular mechanisms of cancer into the research community will lead to innovative products being developed, particularly in the area of immuno-oncology therapies.

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

*vivo*Pharm's focus 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.

Solid Tissue Cancers

The term "solid tumors" encompasses abnormal masses of cells that do not include fluid areas (e.g., blood) or cysts. Solid tumors are composed of abnormal cell growths that originate in organs or soft tissue and are normally named after the types of cells that form them. Examples of solid tumors include breast cancer, lung cancer, ovarian cancer and melanoma. Solid tumors may be benign (not cancerous) or malignant (cancerous) and may spread from their primary tissue of origin to other locations in the body (metastasis). There are over 200 individual chemotherapeutic drugs available for combating solid tumor cancers. Selection of an appropriate course of treatment for a patient may depend on identification of the gene mutation or mutations present in their particular cancer and on determining the cancer's tissue of origin. Metastatic tumors with an uncertain primary site can be a difficult clinical problem. In tens of thousands of oncology patients every year, no confident diagnosis is ever issued, making standard-of-care treatment impossible.

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.

*vivo*Pharm's U.S. and European business development and sales professionals have scientific backgrounds in hematology, pathology, and laboratory services, with many years of experience in biopharmaceutical and clinical oncology sales, esoteric laboratory sales from leading biopharmaceutical, pharmaceutical or specialty reference laboratory companies. *Vivo*Pharm currently has a team of four business development and sales professionals in the United States and Europe.

*vivo*Pharm also promotes its services through marketing channels commonly used by the biopharma and pharmaceutical industries, such as internet, medical meetings and broad-based publication of its scientific and economic data. In addition, *vivo*Pharm provides easy-to-access information to its customers over the internet through dedicated websites. *vivo*Pharm's customers value easily accessible information in order to quickly review patient or study information.

Competition

The largest competitors in the global preclinical CRO market are companies like Pharmaceutical Product Development, LLC (US), MD Biosciences (US)., IQVIA (US), PAREXEL International Corporation (US), Envigo (US), Charles River (US), Inotiv (US), ICON PLC (Dublin), PRA Health Sciences

(US), Medpace (US), Laboratory Corporation of America Holdings (US), WuXi AppTec (China) and Eurofins Scientific (Luxembourg). The players operating in the global preclinical CRO market are focusing on product unveilings, along with intensifying their global presence by entering untouched markets.

Projects related to the molecular mechanisms driving cancer development have received increased government funding, both in the United States and internationally. The National Cancer Institutes' Cancer Moonshot is anticipated to increase both patient awareness and federal government funding for research and clinical trials. The Federal Government has committed $1.8 billion over a 7-year period to fund the 21st Century Cures Act. As more information regarding cancer genomics and biomarkers becomes available to the public, *vivo*Pharm anticipates that more products aimed at identifying targeted treatment options will be developed and that these products may compete with its products.

Third-Party Suppliers

*vivo*Pharm currently relies on third-party suppliers for its specialized research and scientific instrumentation and related supplies of reagents, tumor cell lines, and other inventory for it to successfully perform its CRO services for its customers. vivoPharm does not believe a short-term disruption from any one of these suppliers would have a material effect on its business, nor has *vivo*Pharm experienced any material disruptions due to COVID-19.

Operations and Production Facilities

As a preclinical oncology CRO, *vivo*Pharm's leased facilities are built to house immunocompromised mice, conventional rodents and specialized models. They incorporate surgical suites, gowning rooms, and holding rooms. In order to ensure an environment of utmost sterility, while also minimizing the workload by negating dependency on cage-wash infrastructure, *vivo*Pharm relies on its landlords and licensors to manage the vivariums at its animal facilities. This allows for capacity utilization flexibility and focus of time and energy into scientific endeavors.

Quality Assurance

*vivo*Pharm is committed to maintaining a standard of excellence and to providing reliable and accurate laboratory services to its customers. To that goal, *vivo*Pharm's independent Quality Assurance Unit ("QAU") has implemented a comprehensive and integrated Quality Management System ("QMS") designed to drive consistent high quality testing services while ensuring the highest ethical standards across its business. *vivo*Pharm's QMS satisfies FDA requirements for nonclinical studies conduct and content, computer systems validation, electronic records and signatures, and GLP.

***vivo*Pharm Governmental Regulations**

*vivo*Pharm's Pennsylvania and Australia research laboratory facilities comply with GLP" to the extent required by the FDA, Environmental Protection Agency, USDA, Organization for Economic Co-operation and Development ("OECD"), as well as other international regulatory agencies. Furthermore, *vivo*Pharm's early-stage discovery work, which is not subject to GLP standards, is typically carried out under a quality management system or internally developed quality systems. *vivo*Pharm's facilities are regularly inspected by U.S. and other regulatory compliance monitoring authorities, its clients' quality assurance departments, and its own internal quality assessment program.

Other Discontinuing Operations

In July 2019, CGI sold all assets related to its BioPharma and Clinical businesses. As of December 31, 2021, $409 thousand of liabilities 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, 2022, we had 34 full-time employees, including 8 with Ph.D. degrees in our continuing Vyant Bio and StemoniX operations. Of these employees, 24 are in research and development and 10 are general and administrative. As of March 15, 2022, we had 38 full-time employees in our *vivo*Pharm business, including 10 with Ph.D. degrees. 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 higher employee turnover in the past year given the demand for our employees and overall employment market conditions, including increased salaries and a high number of job openings, which have been part of the "Great Resignation" that has been experienced by many companies that are highly dependent on human capital talent. The retention of our employees is a high priority as well as recruiting key talent to meet our business goals.

Segment and Geographical Information

The Company operates in one reportable business segment and derive revenue from multiple countries, with 61% and 80% of its continuing operations revenue coming from the United States in fiscal year 2021 and 2020, 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. The Company included the website address in this annual report on Form 10-K only as an inactive textual reference and does not intend it to be an active link to the Company website. The information on the website is not incorporated by reference in this annual report on Form 10-K.

This annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports, as well as other documents the Company files with the U.S. Securities and Exchange Commission ("SEC"), are available free of charge through the Investors section of the Company website at https://ir.vyantbio.com/sec-filings as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. The public can obtain documents that the Company files with the SEC at *www.sec.gov*.

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 have a history of net losses, expect to incur net losses in the future and may never achieve sustained profitability.
- We have limited experience in drug discovery and drug development, and we have never advanced a drug to human development or had a drug approved alone or with collaborators.

- 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.
- We do not have any experience in clinical development and have not advanced any drug candidates into clinical development.
- 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.
- Our business is subject to risks arising from epidemic diseases, such as the global outbreak of COVID-19.

- 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.
- Our success depends upon achieving a critical mass of customers and strategic relationships.
- We may acquire other businesses or make investments in other companies or technologies that could harm operating results, dilute its stockholders' ownership, increase debt or cause us to incur significant expense.
- We may not be able to sell the *vivo*Pharm business and/or any sales we consummate may not produce the desired results.
- 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 senior management team or the inability to attract and retain highly skilled scientists, clinicians and salespeople could adversely affect our business.
- If we are unable to manage growth, our prospects may be limited, and our future results of operations may be adversely affected.
- 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.

Risks Relating to the 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 $40.9 million and $8.7 million for the years ended December 31, 2021 and 2020, respectively, and had an accumulated deficit of $78.8 million as of December 31, 2021. The 2021 results including a net loss from discontinuing operations of $22.3 million, which includes a $20.2 million goodwill impairment charge as well as continuing operations non-cash expenses of $4.8 million and merger related costs of $2.3 million. 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 revenue growth 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.

Prior to the Merger and receipt of the net proceeds of the financings that were a condition of the Merger, recurring losses from operations raised substantial doubt regarding our ability to continue as a going concern, and we may need to raise additional capital by issuing securities or debt or through licensing arrangements, which may cause dilution to stockholders or restrict operations or proprietary rights.

For the years ended December 31, 2021 and 2020, we had net cash used in operating activities from continuing operations of $16.5 million and $5.8 million, respectively. We expect our expenses to increase in connection with our ongoing activities.

The Company had cash and cash equivalents of $20.6 million as of December 31, 2021. The Company's management has projected that the Company's cash on hand, together with net proceeds from the planned sale of the *vivo*Pharm business during 2022 as well as proceeds from sales of common stock pursuant to the Purchase Agreement (as defined below) with Lincoln Park Capital, LLC will be adequate to fund the Company's currently planned operations into the second quarter of 2023. Such estimate may prove to be wrong, and we could use our available capital resources sooner than we currently expect, and/or the capital resources that we are assuming will be present could fail to materialize at the amounts we project or at all

For instance, changing circumstances, some of which may be beyond our control, could cause us to consume capital significantly faster than we currently anticipate, and we may need to seek additional funds sooner than planned. Future capital requirements depend upon many factors, including, but not limited to:

- the rate at which invest in our disease model and therapeutic drug development;
- the rate at which we are able to enter into strategic relationships;
- the extent to which we commence development activities for new therapeutic indications;
- the response of competitors to our products and services;
- the costs of preparing, filing and prosecuting patent applications, maintaining and protecting our intellectual property rights including enforcing and defending intellectual property related claims; and
- the costs of operating as a public company.

We may seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances, licensing arrangements or monetization transactions. To the extent that we raise additional capital through the sale of equity, convertible debt securities or other equity-based derivative securities, our existing shareholders' ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect shareholder rights. Any indebtedness we incur would result in increased fixed payment obligations and could involve restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Furthermore, the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our common stock to decline and existing shareholders may not agree with our financing plans or the terms of such financings. If we raise additional funds through strategic partnerships and alliances, licensing arrangements or monetization transactions with third parties, we may have to relinquish valuable rights to our technologies, or our products, or grant licenses on terms unfavorable to us. Adequate additional financing may not be available to us on acceptable terms, or at all. If we are unable to raise additional funds when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market products that we would otherwise prefer to develop and market ourselves.

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 has been derived from our *vivo*Pharm business, which we have committed to a plan to sell. 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. We anticipate revenue generated from these activities will substantially cease in the first half of 2022, and

we will focus 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.

CGI identified a material weakness in its internal control over financial reporting. If we are not able to remediate the material weakness and otherwise maintain an effective system of internal control over financial reporting, the reliability of its 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 our *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 our *vivo*Pharm business as of December 31, 2021, the redesign of this control and ongoing testing of its operational effectiveness will 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. The Company expects to remediate 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

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.

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 is to attempt to file approximately two investigational new drug ("IND") applications with United States Food and Drug Administration ("FDA") starting in 2023 and perform clinical trials up through Phase I. 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 internal drug discovery business may need to transition to a business capable of supporting clinical development activities. We may not be successful in such a transition.

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 plan to design, fund and operate Phase 1 clinical trials and the license our drug candidates and 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 the COVID-19 pandemic 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 an New Drug Application (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.

Any investigation of our customers could damage our business.

From time to time, one or more of our customers may be audited or investigated by regulatory authorities or enforcement agencies with respect to regulatory compliance of their clinical trials, programs or the marketing and sale of their drugs. There is a risk that either our customers or regulatory authorities could claim that we performed services improperly or that we are responsible for clinical trial or program compliance. If our customers or regulatory authorities make such claims against us and prove them, we could be subject to damages, fines or penalties. In addition, negative publicity regarding regulatory compliance of customers' clinical trials, programs or drugs could have an adverse effect on our business and reputation.

We may acquire other businesses or make investments in other companies or technologies that could harm operating results, dilute its stockholders' ownership, increase debt or cause us to incur significant expense.

As part of our business strategy, we may pursue other mergers or acquisitions of businesses and assets. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into existing business, and could assume unknown or contingent liabilities. Any future

acquisitions also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could have a material adverse effect on our financial condition, results of operations and cash flows. Integration of an acquired company also may disrupt ongoing operations and require management resources that would otherwise focus on developing existing business. We may experience losses related to investments in other companies, which could have a material negative effect on the results of operations. We may not identify or complete these transactions in a timely manner, on a cost-effective basis, or at all, and may not realize the anticipated benefits of any acquisition, technology license, strategic alliance or joint venture.

To finance any mergers or acquisitions, we may choose to issue shares of common stock as consideration, which would dilute the ownership of its stockholders. If the price of our common stock is low or volatile, we may not be able to acquire other companies using stock as consideration. Alternatively, it may be necessary for us to raise additional funds for acquisitions through public or private financings. Additional funds may not be available on terms that are favorable to us, or at all.

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 results of operations may be adversely affected if we fail to realize the full value of our assets.

We assess the realizable condition of goodwill annually and conducts an interim evaluation of these assets as well as amortizing indefinite-lived intangible assets whenever events or changes in circumstances, such as operating losses or a significant decline in earnings associated with the acquired business or asset, indicate that these assets may be impaired. In connection with the Merger and in accordance with US GAAP, we recorded $9.5 million of amortizing intangible assets and $22.0 million of goodwill based on the fair value of the Cancer Genetic's outstanding common stock, stock options and warrants on the day of the Merger. All of the amortizing intangible assets and goodwill were allocated to the *vivo*Pharm business. During the fourth quarter of 2021, we commenced a process to sell our *vivo*Pharm business and reclassified its operations as discontinuing operations. Upon this change in classification, we recorded an impairment charge of $20.2 million to reflect the estimated net proceeds from the sale of this business. Our ability to realize the carrying value of the *vivo*Pharm business recorded as of December 31, 2021 will depend on the future cash flows from the sale of the *vivo*Pharm business. If we are not able to realize the value of the goodwill and indefinite-lived intangible assets, we may be required to incur additional material charges relating to the impairment of those assets. Such impairment charges could materially and adversely affect our operating results and financial condition.

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.

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.

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. Tensions between Ukraine and Russia have escalated in recent months, culminating in Russia's recent invasion of Ukraine. Continued escalation of political tensions, economic instability, military activity or civil hostilities in Ukraine could disrupt our ability to obtain these compounds on a timely basis or at all. 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.

Risks Related to vivoPharm

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

During the year ended December 31, 2021, we committed to a plan to sell the *vivo*Pharm business as we believe it is in the best interest of our stockholders. As a result, the *vivo*Pharm business been classified as discontinuing operations in the consolidated financial statements in this Annual Report on Form 10-K. As of December 31, 2021, our net assets held for sale totaled $9.4 million, excluding cash. See Note 3 - *Discontinuing* Operations to the consolidated financial statements in this Annual Report on Form 10-K for more information.

We can provide no assurances that we will successfully sell the *vivo*Pharm 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 sales price of the *vivo*Pharm business which are outside our control, therefore, there can be no assurance that the *vivo*Pharm business can be sold for a price that in our opinion reflects its fair value. If a sale of the *vivo*Pharm business at what we consider to be a reasonable price is not available, we may decide to cease efforts to sell the *vivo*Pharm business and would be required to again reflect the *vivo*Pharm business as part of our continuing operations for financial accounting and reporting purposes. Such a change would also require us to restate our financial statements retroactively for all reportable periods, which would change the information being reported herein. Because *vivo*Pharm incurred an operating loss for fiscal 2021, such a change would negatively affect our fiscal 2021 results from continuing operations.

Our discovery services customers face intense competition from lower cost generic products, which may lower the amount that they spend on our services.

Our discovery service customers face increasing competition from lower cost generic products, which in turn may affect their ability to pursue research and development activities with us. In the United States, EU and Japan, political pressure to reduce spending on prescription drugs has led to legislation and other measures which encourages the use of generic products. In addition, proposals emerge from time to time in the United States and other countries for legislation to further encourage the early and rapid approval of generic drugs. Loss of patent protection for a product typically is followed promptly by generic substitutes, reducing customers' sales of that product and their overall profitability. Availability of generic substitutes for our customers' drugs may adversely affect their results of operations and cash flow, which in turn may mean that they would not have surplus capital to invest in research and development and drug commercialization, including in our services. If competition from generic products impacts customers' finances such that they decide to curtail our services, revenue may decline and this could have a material adverse effect on our business.

The potential loss or delay of our large contracts or of multiple contracts could adversely affect results.

Most of our discovery services customers can terminate the contracts upon 30 to 90 days' notice. These customers may delay, terminate or reduce the scope of the contracts for a variety of reasons beyond our control, including but not limited to:

- decisions to forego or terminate a particular clinical trial;
- lack of available financing, budgetary limits or changing priorities;

- failure of products being tested to satisfy safety requirements or efficacy criteria;
- unexpected or undesired clinical results for products; or
- shift of business to a competitor or internal resources.

As a result, contract terminations, delays and alterations are a possible outcome in our discovery services business. In the event of termination, the contracts often provide for fees for winding down the project, but these fees may not be sufficient for us to maintain margins, and termination may result in lower resource utilization rates. In addition, we may not realize the full benefits of the backlog of contractually committed services if customers cancel, delay or reduce their commitments under our contracts with them, which may occur if, among other things, a customer decides to shift its business to a competitor or revoke our status as a preferred provider. Thus, the loss or delay of a large contract or the loss or delay of multiple contracts could adversely affect our revenue and profitability. We believe the risk of loss or delay of multiple contracts potentially has greater effect where we are party to broader partnering arrangements with global biopharmaceutical companies.

Our financial results may be adversely affected if we underprice contracts, overruns cost estimates or fails to receive approval for or experience delays in documenting change orders.

Most of the discovery services contracts are either fee for service contracts or fixed-fee contracts. Our past financial results have been, and future financial results may be, adversely impacted if we initially underprice contracts or otherwise overrun cost estimates and is unable to successfully negotiate a change order. Change orders can occur when the scope of work we perform need to be modified from that originally contemplated by the contract with the customer and are typically treated as new projects. Modifications can occur, for example, when there is a change in a key clinical trial assumption or parameter or a significant change in timing. Where we are not successful in converting out-of-scope work into change orders under current contracts, we bear the cost of the additional work. Such underpricing, significant cost overruns or delay in documentation of change orders could have a material adverse effect on our business, results of operations, financial condition or cash flows.

If we fail to perform the services in accordance with contractual requirements, regulatory standards and ethical considerations, we could be subject to significant costs or liability and our reputation could be harmed.

In connection with the discovery services business, we contract with biopharmaceutical companies to provide specialized services to assist them in planning and conducting unique, specialized studies to guide drug discovery and development programs with a concentration in oncology and immuno-oncology. Our services include managing pre-clinical trials, data and laboratory analysis, electronic data capture and other related services. Such services are complex and subject to contractual requirements, regulatory standards and ethical considerations. If we fail to perform the services in accordance with these requirements, regulatory agencies may take action against us for failure to comply with applicable regulations governing clinical trials. Customers may also bring claims against us for breach of contractual obligations. Any such action could have a material adverse effect on results of operations, financial condition and reputation.

The performance of clinical development services is complex and time-consuming. For example, we may make mistakes in conducting a clinical trial that could negatively impact or obviate the usefulness of the clinical trial or cause the results of the clinical trial to be reported improperly. If the clinical trial results are compromised, we could be subject to significant costs or liability, which could have an adverse impact on the ability to perform services. As examples:

- non-compliance generally could result in the termination of ongoing clinical trials or sales and marketing projects or the disqualification of data for submission to regulatory authorities;
- compromise of data from a particular clinical trial, such as failure to verify that informed consent was obtained from patients, could require us to repeat the clinical trial under the terms of the contract at no further cost to the customer, but at a substantial cost to us; and
- breach of a contractual term could result in liability for damages or termination of the contract.

While we endeavor to contractually limit exposure to such risks, improper performance of our services could have an adverse effect on our financial condition, damage reputation and result in the cancellation of current contracts by or failure to obtain future contracts from the affected customer or other customers.

In our preclinical CRO business unit doing early-stage discovery work we conduct testing on animals, which could subject us to disruptions by animal rights activists, and we are subject to laws and standards dealing with animal testing, each of which could affect our business negatively.

Our Pennsylvania and Australia research laboratory facilities comply with Good Laboratory Practices ("GLP") to the extent required by the FDA, Environmental Protection Agency, USDA, Organization for Economic Co-operation and Development ("OECD"), as well as other international regulatory agencies. Furthermore, our early-stage discovery work, which is not subject to GLP standards, is typically carried out under a quality management system or internally developed quality systems. Our facilities are regularly inspected by U.S. and other regulatory compliance monitoring authorities, its clients' quality assurance departments, and its own internal quality assessment program. We are also accredited by American Association for Accreditation of Laboratory Animal Care ("AAALAC") International, a private, nonprofit organization that promotes the humane treatment of animals in science through voluntary accreditation and assessment programs. We volunteer to participate in the AAALAC's program to demonstrate its commitment to responsible animal care and use, in addition to its compliance with local, state and federal laws that regulate animal research.

Animal rights group, such as People for the Ethical Treatment of Animals ("PETA") have in the past targeted scientific research, which, if targeted at us or our customers, could affect our business.

International expansion of our business exposes us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.

Our business strategy incorporates international expansion, including recent acquisitions which have provided facilities in Australia, and the possibility of establishing and maintaining other locations outside of the United States and expanding relationships with biopharmaceutical, academic and governmental research organizations. Doing business internationally involves a number of risks, including:

- multiple, conflicting and changing laws and regulations such as tax and transfer pricing laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- being subject to additional privacy and cybersecurity laws, including the Australian Privacy Act of 1988;
- failure by us or our distributors to obtain regulatory approvals for the sale or use of tests in various countries, including failure to achieve "CE Marking", a conformity mark which is required to market in vitro diagnostic medical devices in the European Economic Area and which is broadly accepted in other international markets;
- difficulties in managing foreign operations;
- financial risks, such as longer payment cycles, difficulty enforcing contracts and collecting accounts receivable and exposure to foreign currency exchange rate fluctuations;
- reduced protection for intellectual property rights;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of

trade and other business restrictions; and

- failure to comply with the Foreign Corrupt Practices Act ("FCPA"), including its books and records provisions and its anti-bribery provisions, by maintaining accurate information and control over sales and distributors' activities.

Any of these risks, if encountered, could significantly harm future international expansion and operations and, consequently, have a material adverse effect on our financial condition, results of operations and cash flows.

Our operating results may be adversely affected by fluctuations in foreign currency exchange rates and restrictions on the deployment of cash across global operations.

Although we report operating results in U.S. dollars, a portion of our revenue and expenses are or will be denominated in currencies other than the U.S. dollar, particularly in Australia and Europe. Fluctuations in foreign currency exchange rates can have a number of adverse effects on the Company. Because our consolidated financial statements are presented in U.S. dollars, we must translate revenue, expenses and income, as well as assets and liabilities, into U.S. dollars at exchange rates in effect during or at the end of each reporting period. Therefore, changes in the value of the U.S. dollar against other currencies will affect revenue, income from operations, other income (expense), net and the value of consolidated balance sheet items originally denominated in other currencies. There is no guarantee that our financial results will not be adversely affected by currency exchange rate fluctuations. In addition, in some countries we could be subject to strict restrictions on the movement of cash and the exchange of foreign currencies, which could limit our ability to use these funds across its global operations.

We could be adversely affected by violations of the FCPA and other worldwide anti-bribery laws.

The FCPA and anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business or other commercial advantage. Our policies mandate compliance with these anti-bribery laws, which often carry substantial penalties, including criminal and civil fines, potential loss of export licenses, possible suspension of the ability to do business with the federal government, denial of government reimbursement for products and exclusion from participation in government health care programs. We may operate in jurisdictions that have experienced governmental and private sector corruption to some degree, and, in certain circumstances, strict compliance with anti-bribery laws may conflict with certain local customs and practices. We cannot assure that the internal control policies and procedures always will protect us from reckless or other inappropriate acts committed by affiliates, employees or agents. Violations of these laws, or allegations of such violations, could have a material adverse effect on our business, financial position and results of operations.

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 investigational new drug application (IND), 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. We have been sourcing a number of our lab supplies from alternative suppliers due to product availability from our normal suppliers. For our StemoniX business, 384 well plates used to grow microOrgans are in scarce supply to due to product availability and a lack of alternative suppliers.

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 twenty 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 the 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 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, we had 34 employees in our continuing operations and 38 employees in our *vivo*Pharm business. 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 hire or retain adequate staffing levels to develop our technology or run our operations or to accomplish all of the objectives that we otherwise would seek to accomplish.

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 key members of the senior management team. The individual and collective efforts of these employees will be important as we continue to develop tests and services, and as we expand commercial activities. We have experienced increased turnover in the past year and the loss or incapacity of existing members of the senior management team could adversely affect operations if we experience difficulties in hiring qualified successors.

The complexity inherent in integrating a new key member of the senior management team with existing senior management may limit the effectiveness of any such successor or otherwise adversely affect our business. Leadership transitions can be inherently difficult to manage and may cause uncertainty or a disruption to business or may increase the likelihood of turnover of other key officers and employees. Specifically, a leadership transition in the commercial team may cause uncertainty about or a disruption to our commercial organization, which may impact the ability to achieve sales and revenue targets.

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 10.9% of our outstanding common stock as of March 15, 2022. 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.

If we are unable to manage growth, our prospects may be limited and our future results of operations may be adversely affected.

We intend to continue to attempt to expand our business with sales and marketing programs and other activities as needed to meet future demand. Any significant expansion may strain managerial, financial and other resources. If we are unable to manage such growth, business, operating results and financial condition could be adversely affected. We will need to improve continually the operations, financial and other internal systems to manage growth effectively, and any failure to do so may lead to inefficiencies and redundancies, and result in reduced growth prospects and diminished operational results.

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 consummation of the merger of Cancer Genetics and StemoniX on March 30, 2021 through March 15, 2022, the market price of our common stock has fluctuated from a high of $4.81 per share in the second quarter of 2021 to a low of $0.99 in the first quarter of 2022. 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.

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, 2021, the Company has lease agreements for our three locations for continuing operations, including a 5,837 square foot research and development space, as well as shared office suite space, in La Jolla, California, a 14,932 square foot lab, manufacturing and office space in Maple Grove, Minnesota, and a 1,625 square foot corporate headquarters office space in Cherry Hill, New Jersey. All leases have

escalating payment schedules. The La Jolla lease expires in March, 2022, at which time the La Jolla operations will move to a 4,995 square foot facility in La Jolla. The new La Jolla 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 and that suitable additional space will be available as needed.

*vivo*Pharm operates in leased facilities in Hershey, Pennsylvania, Berlin, Germany and two locations in Australia.

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, 2021, the Company had approximately 83 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.

In December 2021, the Company's Board of Directors approved a plan to sell the *vivo*Pharm Pty Ltd ("*vivo*Pharm") business to allow the Company to focus on the development of neurological developmental and degenerative disease therapeutics. We engaged an investment banker in December 2021 to sell the *vivo*Pharm business during 2022.

Cancer Genetics, Inc. Merger

On March 30, 2021, Vyant Bio, Inc. (the "Company", "Vyant Bio", "VYNT" or "we"), 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 11,007,186 shares of Common Stock or $50.74 million, 2,157,686 Common Stock warrants or $9.04 million and 55,907 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 804,711 incremental shares in accordance with the conversion ratio set forth in the Merger Agreement.

Business Disposals - Discontinuing Operations

In December 2021, *vivo*Pharm, met the criteria to be reported as discontinuing operations. Therefore, the related assets, liabilities, operating results and cash flows of the *vivo*Pharm business are reported as discontinuing operations as of December 31, and for period from the Merger date of March 30, 2021 through December 31, 2021. See Note 3 Discontinuing operations, to the Consolidated Financial Statements included in Part II, Item

8 below for additional information.

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. The Company plans to focus its resources on internal drug discovery development programs and will wind down substantially all customer revenue generation in the first half of 2022. For the years ended December 31, 2021 and 2020, 21% of revenue in each year was generated from customers located outside of the United States. During the years ended December 31, 2021 and 2020, three customers accounted for approximately 47% and two customers accounted for approximately 39%, 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 is converting the Maple Grove facility to a research and development facility in the first half of 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. The Company intends to accelerate its drug discovery development activities in 2022 and beyond.

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.

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. Further, as noted in Note 3 Discontinuing operations, to the Consolidated Financial Statements included in Part II, Item 8 below for additional information, the *vivo*Pharm business has been classified as discontinuing operations as of December 31, 2021.

Results of Operations

Years Ended December 31, 2021 and 2020

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	
	2021	2020	$	%
Revenue:				
Service	$ 665	$ 588	$ 77	13%
Product	483	279	204	73%
Total revenue	1,148	867	281	32%
Operating costs and expenses:				
Cost of goods sold - service	408	384	24	6%
Cost of goods sold - product	1,439	717	722	101%
Research and development	4,273	3,232	1,041	32%
Selling, general and administrative	8,424	2,717	5,707	210%
Merger related costs	2,310	1,440	870	60%
Total operating costs and expenses	16,854	8,490	8,364	99%
Loss from operations	(15,706)	(7,623)	(8,083)	106%
Other expense:				
Change in fair value of warrant liability	214	-	214	N/A
Change in fair value of share settlement obligation derivative	(250)	(503)	253	(50)%
Loss on debt conversions	(2,518)	-	(2,518)	N/A
Other income, net	57	11	46	418%
Interest expense, net	(372)	(535)	163	(30)%
Total other expense, net	(2,869)	(1,027)	(1,842)	179%
Loss from continuing operations before income				

taxes	(18,575)	(8,650)	(9,926)	115%
Income tax expense (benefit)	-	-	-	-
Net loss from continuing operations	$ (18,575)	$ (8,650)	$ (9,926)	115%

Revenue from Continuing Operations

Total revenue from continuing operations increased 32%, or $281 thousand, to $1.1 million for the year ended December 31, 2021, from $867 thousand for the year ended December 31, 2020. The increase in service revenue was primarily due to increased sales after COVID slowdown in 2020. Product revenue increased by $204 thousand in 2021 as compared with 2020 as the result of increased sales volume of $147 thousand and average selling prices of $57 thousand.

Cost of Goods from Continuing Operations

Cost of goods sold - service aggregated $408 thousand and $384 thousand, respectively, for the years ended December 31, 2021 and 2020, resulting in a cost of goods sold of 61.4% and 65.3%, respectively, of service revenue. The 2020 period was impacted by two negative margin service contracts.

Cost of goods sold - product aggregated $1.4 million and $717 thousand for the years ended December 31, 2021 and 2020, respectively, resulting in a gross margin deficit of $956 thousand and $438 thousand, respectively, resulting from StemoniX's excess manufacturing capacity at its Maple Grove facility. The increase in the cost of goods sold and margin deficit in the 2021 period as compared with the 2020 period was the result of increased employee related costs due to increased headcount, as the 2020 period reflecting lower costs from the benefit of the Paycheck Protection Program ("PPP") loan forgiveness, which is reflected as a reimbursement of manufacturing and quality salaries, and additional production costs in 2021 due to increased sales volume.

Operating Expenses from Continuing Operations

Research and Development Expenses. Research and development expenses from continuing operations increased 32%, or $1.0 million, to $4.3 million for the year ended December 31, 2021, from $3.2 million for the year ended December 31, 2020 principally due to a $750 thousand increase in personnel costs resulting from additional headcount, including the hiring of a Chief Scientific Officer in October 2021 as well as a $315 thousand reduction in the 2020 research and development expense reimbursement from the Company's PPP loan. In addition, the Company increased collaboration developmental expenses by $224 thousand as well as other lab and legal expenses by $401 thousand in 2021 as compared with 2020.

Selling, General and Administrative Expenses. Selling, general and administrative expenses from continuing operations increased over 200%, or $5.7 million, to $8.4 million for the year ended December 31, 2021, from $2.7 million for the year ended December 31, 2020 primarily due to post-Merger public company costs including increased headcount costs of $1.4 million, stock-based compensation of $855 thousand, professional fees of $1.7 million, insurance costs of $1.2 million and other Board of Director, software, franchise tax and investor relations costs aggregating $487 thousand.

Merger Related Costs. Merger related costs for the years ended December 31, 2021 and 2020, were $2.3 million and $1.4 million, respectively. The increase in the 2021 merger related costs was primarily from investment banker fees related to the closing of the Merger.

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 and $503 thousand mark-to-market losses during the years ended December 31, 2021 and 2020, respectively, 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 $163 thousand, or 30%, to $372 thousand during the year ended December 31, 2021, from $535 thousand during the year ended December 31, 2020, primarily related to the conversion of the 2020 Convertible Notes to equity upon the closing of the Merger.

Discontinuing Operations

In connection with the Merger, the Company was deemed to be the accounting acquiror of the *vivo*Pharm business on March 30, 2021. Therefore, the *vivo*Pharm business is not reflected in the Company's 2020 operating results. After the Merger, the *vivo*Pharm business generated $4.0 million in revenue in 2021 and incurred a $22.3 million net loss. This net loss includes a goodwill impairment charge of $20.2 million, $713 thousand of amortization of intangible assets arising from the merger, $112 thousand of professional service costs related to accounting for the *vivo*Pharm business and a $1.25 million operating loss. The 2021 operating loss was significantly impacted by lower than expected revenue resulting from turnover in the *vivo*Pharm business development team and the delay in the commencement of two large customer contracts which were signed in the second and third quarter.

Liquidity and Capital Resources

Sources and Uses of Liquidity

The Company's operating activities have been primarily funded with proceeds from the sale of convertible notes and preferred stock securities. Prior to the Merger, CGI's primary sources of liquidity had been cash collections from its customers and funds generated from debt and equity financings. The Company is expected to generate minimal revenue from the StemoniX business during the first half of 2022 as it winds down its revenue producing operations to support its internal drug discovery programs. The Company had cash and cash equivalents of $20.6 million as of December 31, 2021. The Company's management has projected that the Company's cash on hand, together with the net proceeds from the planned sale of the *vivo*Pharm business during 2022 and proceeds from sales of common stock pursuant to the Purchase Agreement with Lincoln Park Capital, LLC, will be adequate to fund the Company's currently planned operations into the second quarter of 2023. Such estimate may prove to be wrong, and we could use our available capital resources sooner than we currently expect, and/or the capital resources that we are assuming will be present could fail to materialize at the amounts we project or at all.

The Company expects to continue to incur operating losses in the future, unless and until the Company's drug discovery efforts or other revenue from collaborators are able to demonstrate a level of success that would lead to licensing potential. In addition, the Company will continue to incur the costs of being public, including legal and audit fees and director's and officer's liability insurance. These losses have had, and will continue to

have, an adverse effect on the Company's working capital, total assets and stockholders' equity. Because of the numerous risks and uncertainties associated with drug discovery and development efforts and costs associated with being a public company, the Company is unable to predict when it will become profitable, and it may never become profitable. Even if the Company does achieve profitability, it may not be able to sustain or increase profitability on a quarterly or annual basis. The Company's inability to achieve and then maintain profitability would negatively affect its business, financial condition, results of operations and cash flows.

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. Additionally, on March 28, 2022, the Company entered into a registration rights agreement (the "Registration Rights Agreement") with Lincoln Park, pursuant to which the Company agreed to file a registration statement with the Securities and Exchange Commission (the "SEC"), covering the resale of shares of common stock issued to Lincoln Park under the Purchase Agreement. In addition, under the Purchase Agreement, the Company agreed to issue a commitment fee of 405,953 common shares, or the Commitment Shares, as consideration for Lincoln Park entering into the Purchase Agreement. The Company cannot sell any shares to Lincoln Park until the date that a registration statement covering the resale of shares of common stock that have been, and may in the future be, issued to Lincoln Park under the Purchase Agreement is declared effective by the SEC and a final prospectus in connection therewith is filed and all of the other conditions set forth in the Purchase Agreement are satisfied (such date, the "Commencement Date"). Under the Purchase Agreement, the Company may from time to time for 30 months following the Commencement Date, at its discretion, direct Lincoln Park to purchase on any single business day, or a Regular Purchase, up to (i) 50,000 common shares, (ii) 75,000 common shares if the closing sale price of its common shares is not below $1.50 per share on Nasdaq or (iii) 100,000 common shares if the closing sale price of its common shares is not below $2.50 per share on Nasdaq. In addition to Regular Purchases, the Company may also direct Lincoln Park to purchase other amounts as accelerated purchases or as additional accelerated purchases on the terms and subject to the conditions set forth in the Purchase Agreement. In any case, Lincoln Park's commitment in any single Regular Purchase may not exceed $1.0 million absent a mutual agreement to increase such amount. The purchase price per share for each Regular Purchase will be based on prevailing market prices of the Common Stock immediately preceding the time of sale as computed in accordance with the terms set forth in the Purchase Agreement. There are no upper limits on the price per share that Lincoln Park must pay for shares of Common Stock under the Purchase Agreement. The Purchase Agreement may be terminated by the Company at any time after the Commencement Date, at its sole discretion, without any cost or penalty, by giving one business day notice to Lincoln Park to terminate the Purchase Agreement.

During the next twelve months, the Company may take further steps to raise additional capital to meet our long-term liquidity needs including, but not limited to, one or more of the following: the licensing of drug candidates with existing or new collaborative partners, possible business combinations, issuance of debt, or the issuance of common stock or other securities via private placements or public offerings. Although the Company has been successful in raising capital in the past, there can be no assurance that additional financing will be available on acceptable terms, if at all, and its negotiating position in capital raising efforts may worsen as existing resources are used. There is also no assurance that the Company will be able to enter into collaborative relationships that will provide sources of liquidity. Additional equity financings may be dilutive to our stockholders. Debt financing, if available, may involve significant cash payment obligations and covenants that restrict the Company's ability to operate as a business. Licensing or strategic collaborations may result in royalties or other terms which reduce our economic potential from products under development. If the Company is unable to raise the funds necessary to meet its long-term liquidity needs, the Company may have to delay or discontinue the development of one or more discovery programs, license out programs earlier than expected, raise funds at a significant discount or on other unfavorable terms, if at all, or sell all or a part of the business.

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 expected benefits of, and potential value, including synergies, created by, the Merger for the stockholders of the Company;
- 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 ability to internally identify and develop new iPSC disease models, drug candidates and intellectual property;
- the Company's ability to negotiate strategic partnerships, where appropriate, for technology and research data, iPSC and human primary cell-based disease models or drug candidates;
- the Company's ability to secure clinical co-development partnerships with pharmaceutical and biotechnology companies;
- the Company's need for significant additional capital and the Company's ability to satisfy its capital needs;
- the Company's ability to complete required clinical trials of its products and obtain approval from the FDA or other regulatory agencies in different jurisdictions;
- the Company's ability to execute on its marketing and sales strategy for its preclinical research services and gain acceptance of its services in the market;
- the Company's ability to keep pace with rapidly advancing market and scientific developments;
- the Company's ability to satisfy U.S. (including the FDA) and international regulatory requirements with respect to its services;
- the Company's ability to maintain its present customer base and obtain new customers;
- the Company's ability to maintain the Company's clinical and research collaborations and enter into new collaboration agreements with highly regarded organizations so that, among other things, the Company has access to thought leaders in advanced preclinical and translational science;
- 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 attract and retain a sufficient number of scientists, clinicians, sales personnel and other key personnel with extensive relevant experience, who are in short supply;
- the Company's ability to effectively manage its international businesses in Australia and Europe, including the expansion of its customer base and volume of new contracts in these markets;
- the Company's dependency on the intellectual property licensed to the Company or possessed by third parties; and
- the Company's ability to adequately support future growth.

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,	
	2021	2020

Cash provided by (used in) continuing operations:		
Operating activities	$ (16,488)	$ (5,812)
Investing activities	29,678	(43)
Financing activities	7,222	6,332
Net increase in cash and cash equivalents from continuing operations	$ 20,412	$ 477

The Company had cash and cash equivalents of $20.6 million and $792 thousand as of December 31, 2021 and 2020, respectively.

Cash Used in Operating Activities from Continuing Operations

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.

Net cash used in operating activities from continuing operations was $5.8 million for the year ended December 31, 2020, consisting of a loss of $8.7 million, increased for net non-cash adjustments of $1.5 million, which includes a reduction of $740 thousand in operating expenses from the PPP loan. Operating assets and liabilities provided $1.3 million of cash from the $740 thousand funding of the Company's PPP loan, an increase of $878 thousand in accounts payable principally resulting from accrued merger related professional service costs, offset by $485 thousand in cash utilized for operating lease payments.

Cash Provided by Investing Activities from Continuing Operations

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. Investing activity cash flows from continuing operations were not significant for the year ended December 31, 2020.

Cash Provided by Financing Activities from Continuing Operations

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. The net cash provided by financing activities from continuing operations of $6.3 million for the year ended December 31, 2020 was principally from the issuance of $4.9 million of 2020 Convertible Notes and $1.3 million of Series Preferred B 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, 2021 and 2020 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.
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.
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 Mertons 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 $9.5 million and goodwill of $22.4 million.

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 financial statements, the Company changed the classification of the *vivo*Pharm business to a held for sale asset in the fourth quarter of 2021. Upon change in classification of this asset from held for use to held for sale, the Company was required to perform an analysis of the carrying value of the vivoPharm business as compared with its estimated fair market value assuming the business would be sold. The Company determined the carrying value of the *vivo*Pharm business equally weighting public company revenue multiples and comparable transaction revenue multiples, which are classified as Level 3 measurements within the fair value hierarchy. As described in Note 11 to the Company's financial statements, the Company valued the *vivo*Pharm business at $11 million as of December 31, 2021. This value, less estimated transaction costs and the Company's currency translation adjustment, which is solely related to the *vivo*Pharm business, were compared with the carrying value of the *vivo*Pharm business, and resulted in a $20.2 million goodwill impairment charge in the fourth quarter of 2021.
Intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by that asset or asset group to its carrying amount. If the carrying amount of the long-lived asset or 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, 2021 and 2020, the Company determined that there were no indicators of impairment and did not recognize any fixed asset impairment. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values and appraisals, as considered necessary.

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 conducts business in foreign markets through its subsidiary in Australia (*vivo*Pharm Pty Ltd.). The Company plans to sell the *vivo*Pharm business during 2022. For the years ended December 31, 2021 and 2020, approximately 21% and 21%, respectively, of the Company's continuing revenue were earned outside the United States and collected in local currency. The Company is 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. The translation adjustments for the years ended December 31, 2021 and 2020 were not significant.
Investment of Cash
The Company invests its cash primarily in cash and US government money market funds. 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

Consolidated Financial Report December 31, 2021

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, 2021 and 2020, 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, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

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 Matter

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) relates 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.

Fair Value Measurements Included in Discontinuing Operations - Refer to Notes 3, 4 and 11 to the financial statements

Critical Audit Matter Description

In December 2021, the Company's Board of Directors approved a plan to sell the vivoPharm Pty Ltd ("vivoPharm") business and classified the business as held for sale and discontinuing operations. As a result, the Company performed a valuation of the vivoPharm disposal group, including goodwill and intangible assets, and compared its fair value less costs to sell to its carrying value. The Company's valuation included an equally weighted analysis of similar company sales transactions over the past several years as well as guideline public company multiples of revenue as of December 31, 2021. This valuation requires management to make significant estimates and assumptions related to valuation multiples and forecasts of fiscal year 2022 revenue. Changes in these assumptions could have a significant impact on the fair value and the goodwill impairment charge taken during the year. As a result of this valuation, the Company recorded a goodwill impairment charge of $20.2 million.

We identified the valuation of the vivoPharm disposal group as a critical audit matter because of the significant judgments made by management to estimate the fair value vivoPharm and the resulting impairment charge. This required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, when performing audit procedures to evaluate the reasonableness of management's estimates and assumptions related to selection of the valuation multiples and forecasts of fiscal 2022 revenue.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the valuation of the vivoPharm disposal group included the following, among others:

- Performed sensitivity analyses of the valuation multiples and revenue growth assumptions used in the model.
- Perform substantive testing procedures over the forecasted 2022 revenue used within the valuation model, including inspecting signed contracts for a significant portion of the population. For the remainder of the population where signed contracts were not available, we inquired of management as to the stage of contract negotiations with the customer and obtained cost breakdowns and presentations to the customer to support the value and likelihood of the forecasted revenue.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodology and (2) valuation multiples by:
  - Testing the source information underlying the determination of the multiples and the mathematical accuracy of the calculation.
  - Developing an independent range of valuation multiples and comparing those to the multiples selected by management.
  - Compared quantitative factors including size, profitability, and growth prospects of *vivo*Pharm to that of the guideline public companies.

/s/ DELOITTE & TOUCHE LLP

Minneapolis, Minnesota
March 30, 2022

We have served as the Company's auditor since 2020.

(Formerly Known as Cancer Genetics, Inc.)

Consolidated Balance Sheets

(Shares and USD in Thousands)

	December 31, 2021	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 20,608	$ 792
Trade accounts and other receivables	434	357
Inventory	475	415
Prepaid expenses and other current assets	895	223
Assets of discontinuing operations - current	802	-
Total current assets	23,214	1,787
Non-current assets:		
Fixed assets, net	1,020	1,031
Operating lease right-of-use assets, net	673	1,095
Long-term prepaid expenses and other assets	1,221	136
Assets of discontinuing operations - non-current	11,508	-
Total non-current assets	14,422	2,262
Total Assets	$ 37,636	$ 4,049
Liabilities, Temporary Equity and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	$ 740	$ 1,300
Accrued expenses	764	162
Deferred revenue	74	92
Obligations under operating leases, current portion	174	486
Obligation under finance lease, current portion	157	-
Other current liabilities	-	9
Liabilities of discontinuing operations - current	3,522	-
Total current liabilities	5,431	2,049
Obligations under operating leases, less current portion	516	627
Obligations under finance leases, less current portion	293	-
Share-settlement obligation derivative	-	1,690
Accrued interest	-	277
Long-term debt	57	6,839
Liabilities of discontinuing operations - non-current	49	-
Total Liabilities	6,346	11,482
Commitments and Contingencies (Note 16)		
Temporary Equity		
Series A Convertible Preferred stock, $0.0001 par value; 4,700 shares authorized, 0 and 4,612 shares issued and outstanding as of December 31, 2021 and 2020, respectively (liquidation value of $0 and $11,732, respectively, as of December 31, 2021 and 2020)	-	12,356
Series B Convertible Preferred stock, $0.0001 par value; 4,700 shares authorized, 0 and 3,489 shares issued and outstanding, as of December 31, 2021 and 2020, respectively (liquidation value of $0 and $15,707, respectively, as of December 31, 2021 and 2020)	-	16,651
Series C Convertible Preferred stock, $0.0001 par value; 2,000 shares authorized, 0 shares issued and outstanding as of December 31, 2021 and 2020 (liquidation value of $0 as of December 31, 2021 and 2020)	-	-
Total Temporary Equity	-	29,007
Stockholders' Equity (Deficit)		
Preferred stock, authorized 9,764 shares $ 0.0001 par value, 0 shares issued and outstanding as of December 31, 2021 and 2020	-	-
Common stock, authorized 100,000 shares, $0.0001 par value, 28,993 and 2,594 shares issued and outstanding as of December 31, 2021 and 2020, respectively	3	-
Additional paid-in capital	110,174	1,514
Accumulated comprehensive loss	(74)	-
Accumulated deficit	(78,813)	(37,954)
Total Common Stockholders' Equity (Deficit)	31,290	(36,440)
Total Liabilities and Stockholders' Equity (Deficit)	$ 37,636	$ 4,049

See Notes to Consolidated Financial Statements.

Vyant Bio, Inc.
(Formerly Known as Cancer Genetics, Inc.)
Consolidated Statements of Operations and Comprehensive Loss
(Shares and USD in Thousands)

	Years Ended December 31, 2021	Years Ended December 31, 2020
Revenue:		
Service	$ 665	$ 588

Product	483	279
Total revenue	1,148	867
Operating costs and expenses:		
Cost of goods sold - service	408	384
Cost of goods sold - product	1,439	717
Research and development	4,273	3,232
Selling, general and administrative	8,424	2,717
Merger related costs	2,310	1,440
Total operating costs and expenses	16,854	8,490
Loss from operations	(15,706)	(7,623)
Other income (expense):		
Change in fair value of warrant liability	214	-
Change in fair value of share-settlement obligation derivative	(250)	(503)
Loss on debt conversions	(2,518)	-
Other income	57	11
Interest expense, net	(372)	(535)
Total other income (expense)	(2,869)	(1,027)
Loss from continuing operations before income taxes	(18,575)	(8,650)
Income tax expense (benefit)	-	-
Loss from continuing operations	(18,575)	(8,650)
Discontinuing operations (net of $0 tax benefit in 2021)	(22,284)	-
Net loss	(40,859)	(8,650)
Cumulative translation adjustment	(74)	-
Comprehensive loss	$ (40,933)	$ (8,650)
Net loss per share attributed to common stock - basic and diluted:		
Net loss per share from continuing operations	$ (0.82)	$ (3.48)
Net loss per share from discontinuing operations	(0.99)	-
Net loss per share	$ (1.81)	$ (3.48)
Weighted average shares outstanding:		
Weighted average common shares outstanding - basic and diluted	22,614	2,486

See Notes to Consolidated Financial Statements.

Vyant Bio, Inc.
(Formerly Known as Cancer Genetics, Inc.)
Consolidated Statements of Temporary Equity and Common Stockholders' Equity (Deficit)
Years Ended December 31, 2021 and 2020
(in thousands)

	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 December 31, 2019	4,612	$ 12,356	3,735	$ 18,045	-	$ -	$ 30,401	2,456	$ -	$ 1,047	$ (29,304)	$ -	$ (28,257)
Stock-based compensation	-	-	-	-	-	-	-	-	-	216	-	-	216
Issuance of shares for services	-	-	5	30	-	-	30	20	-	40	-	-	40
Exercise of stock options in exchange for a note payable	-	-	-	-	-	-	-	12	-	26	-	-	26
Issuance of shares upon exercise of common stock options	-	-	-	-	-	-	-	63	-	99	-	-	99
Executives restricted common stock grants	-	-	-	-	-	-	-	43	-	86	-	-	86
Issuance of Series B Convertible Preferred shares, net of issuance costs of $41	-	-	236	1,250	-	-	1,250	-	-	-	-	-	-
Exchange of Series B Preferred Stock for 2020 Convertible Notes	-	-	(487)	(2,674)	-	-	(2,674)	-	-	-	-	-	-
Net loss	-	-	-	-	-	-	-	-	-	-	(8,650)	-	(8,650)
Balance as of December 31, 2020	4,612	$ 12,356	3,489	$ 16,651	-	$ -	$ 29,007	2,594	$ -	$ 1,514	$ (37,954)	$ -	$ (36,440)
Stock-based compensation	-	-	-	-	-	-	-	-	-	1,298	-	-	1,298
Exercise of stock options	-	-	-	-	-	-	-	8	-	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	-	-	-	-	-	-	-	11,007	2	59,918	-	-	59,920
Issuance of incremental shares to StemoniX shareholders upon Merger	-	-	-	-	-	-	-	805	-	-	-	-	-
Conversion of Preferred Stock to Common Stock													

upon Merger	(4,612)	(12,356)	(3,489)	(16,651)	(567)	(1,786)	(30,793)	11,197	1	30,792	-	-	30,793
Conversion of 2020 Convertible Notes to Common Stock upon Merger	-	-	-	-	-	-	-	3,339	-	16,190	-	-	16,190
Preferred stock warrant settled for Common Stock upon Merger	-	-	-	-	-	-	-	43	-	-	-	-	-
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	-	$ -	-	$ -	-	$ -	$ -	28,993	$ 3	$ 110,174	$ (78,813)	$ (74)	$ 31,290

See Notes to Consolidated Financial Statements.

Vyant Bio, Inc.
(Formerly Known as Cancer Genetics, Inc.)
Consolidated Statements of Cash Flows
(USD in thousands)

	Years Ended December 31,	
	2021	2020
Cash Flows from Operating Activities:		
Net loss	$ (40,859)	$ (8,650)
Net loss from discontinuing operations	22,284	-
Reconciliation of net loss to net cash used in operating activities, continuing operations:		
Stock-based compensation	1,003	372
Amortization of operating lease right-of-use assets	504	538
Depreciation and amortization expense	550	572
Change in fair value of share-settlement obligation derivative	250	503
Change in fair value of financial instruments	(210)	-
Accretion of debt discount	173	235
Loss on conversion of debt	2,518	-
PPL loan and EIDL grant forgiveness	-	(740)
Other	(14)	29
Changes in operating assets and liabilities, net of impacts of business combination:		
Trade accounts and other receivables	(77)	(127)
Inventory	(60)	(43)
Prepaid expense and other assets	(165)	68
Accounts payable	(1,146)	878
PPL loan and EIDL grant proceeds	-	740
Obligations under operating leases	(499)	(485)
Accrued expenses and other liabilities	(740)	298
Net cash used in operating activities, continuing operations	(16,488)	(5,812)
Net cash provided by operating activities, discontinuing operations	(505)	-
Net cash used in operating activities	(16,993)	(5,812)
Cash Flows from Investing Activities:		
Purchase of equipment	(535)	(60)
Proceeds from patent held for sale and equipment sales	50	17
Cash acquired from acquisition	30,163	-
Net cash provided by (used in) investing activities, continuing operations	29,678	(43)
Net cash used in investing activities, discontinuing operations	(59)	-
Net cash provided by (used in) investing activities	29,619	(43)
Cash Flows from Financing Activities:		
EIDL loan proceeds	-	57
Issuance of common stock, net of issuance costs	41	98
Issuance of Series B Convertible Preferred Stock, net of issuance costs	-	1,250
Issuance of Series C Convertible Preferred Stock, net of issuance costs	1,786	-
2020 Convertible Note proceeds, net of issuance costs	5,022	4,923
Related party notes payable	-	80
Principal payments on long-term debt	(82)	-
Proceeds from lease financing	492	-
Principal payments on obligations under financing leases	(37)	(76)
Net cash provided by financing activities, continuing operations	7,222	6,332
Net cash used in financing activities, discontinuing operations	(32)	-
Net cash provided by financing activities	7,190	6,332
Net increase in cash and cash equivalents	19,816	477
Cash and cash equivalents, beginning of year	792	315
Cash and cash equivalents, end of year	$ 20,608	$ 792
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 8	$ 5

Cash paid for income taxes		-		1
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		83		373
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		-
Exchange of Series B Convertible Preferred Stock for 2020 Convertible Notes		-		2,674
Related party note payable converted to 2020 Convertible Notes		-		55
Related party note payable exchanged for stock option exercise		-		26
Reclass warrant liability to equity upon Merger		421		-

See Notes to Consolidated Financial Statements.

Vyant Bio, Inc.
(Formerly Known as Cancer Genetics, 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. The Company engaged an investment banker in December 2021 to sell the *vivo*Pharm business during 2022.

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 for StemoniX. 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.

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 17,977,544 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 "Investor Warrant") issued to a certain StemoniX convertible note holder (the "Major Investor")), (ii) options to purchase an aggregate of 891,780 shares of Common Stock to the holders of StemoniX options with exercise prices ranging from $0.66 to $4.61 per share and a weighted average exercise price of $1.46 per share, and (iii) a warrant (the "Major Investor Warrant") to the Major Investor, expiring February 23, 2026 to purchase 143,890 shares of Common Stock at a price of $5.9059 per share in exchange for the 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 11,007,186 shares of Common Stock or $50.74 million, 2,157,686 Common Stock warrants or $9.04 million and 55,907 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 804,711 incremental shares in accordance with the conversion ratio set forth in the Merger Agreement.

The Company incurred $2.3 million and $1.4 million of costs associated with the Merger that have been reported on the consolidated statements of operations as Merger related costs for the years ended December 31, 2021 and 2020, respectively. As of December 31, 2021 and 2020, accounts payable includes $0 thousand and $1.0 million of Merger related costs.

The following details the allocation of the preliminary purchase price consideration recorded on March 30, 2021, the acquisition date, with adjustments recorded in the remainder of 2021, and purchase price allocation.

	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. As of December 31, 2021, the Company has recorded provisional payroll and income taxes payable liabilities. 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, 2020:

	Years ended December 31,	
	2021	2020
Total revenue	$ 6,726	$ 6,618
Net loss	(35,623)	(13,138)
Pro forma loss per common share, basic and diluted	(1.23)	(0.45)
Pro forma weighted average number of common shares basic and diluted	28,977,491	28,875,162

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, 2020, 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 is expected to be completed 2022. No amounts in 2020 were classified as discontinuing operations as the *vivo*Pharm business was acquired as part of the Merger on March 30, 2021.

The Company classified the *vivo*Pharm business as held for sale as of December 31, 2021, and, given the significance of the change in the Company's strategy, classified this business as discontinuing operations in these 2021 consolidated financial statements. In connection with the reclassification of the *vivo*Pharm business as held for sale, the Company completed a valuation of the net carrying value of this business and recorded a goodwill impairment charge of $
20.2 million. The Company valued the *vivo*Pharm business as of December 31, 2021 equally weighting public company revenue multiples and comparable transaction revenue multiples, which are classified as Level 3 measurements within the fair value hierarchy.

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

The following tables reflect the Pre-Merger discontinuing operations and the *vivo*Pharm business operations from March 30, 2021, the Merger date, through December 31, 2021, and related assets and liabilities as of December 31, 2021.

Results of discontinuing operations were as follows:

Revenue	$ 3,978
Cost of goods sold	2,524
General and administrative	3,531
Impairment of goodwill	20,216
Total operating costs and expenses	$ 26,271
Loss from discontinuing operations	$ (22,293)
Total other income	$ 9
Loss from discontinuing operations before income taxes	$ (22,284)
Income tax benefit	-
Net loss from discontinuing operations	$ (22,284)

Asset and liabilities of discontinuing operations were as follows:

Accounts receivable	$ 457

Other current assets		345
Assets of discontinuing operations - current	$	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	$	358
Accrued expense		418
Obligation under operating lease, current		29
Obligation under finance lease, current		32
Deferred revenue		1,911
Taxes payable		365
Other current liabilities		409
Liabilities of discontinued operations - current	$	3,522
Obligations under operating leases, less current	$	2
Obligations under finance leases, less current		47
Liabilities of discontinued operations -non- current	$	49

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.

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, 2021:

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

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.

Reclassification: As a result of the Merger, the Company has reclassified $92 thousand of deferred revenue as of December 31, 2020 previously included in the balance sheet caption other current liabilities to deferred revenue to conform to the post-Merger presentation.

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 year ended December 31, 2021 there were foreign currency translation losses of $
74 thousand, 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. There were no foreign currency translation or transaction gains or losses for the year ended December 31, 2020 as the Merger, which includes significant foreign operations, occurred on March 30, 2021.

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 derivatives and one 2020 Convertible Note accounted for under the fair-value election; deferred tax assets, inventory, right-of-use (ROU) assets and lease liabilities, stock-based compensation, income tax uncertainties, 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. Included in cash and cash equivalents as of December 31, 2020 was $738 thousand of restricted cash related to the Company's PPP loan. The Company was required to escrow the PPP loan proceeds plus accrued interest as the Company's PPP loan forgiveness application had not been processed by the U.S. Small Business Administration at the time of the Merger. This amount was returned to the Company in April 2021 when the PPP loan was fully forgiven. The cash and cash equivalents balance as of December 31, 2021 includes $12 million 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. 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.

Contract assets from continuing operations were $70 thousand and $32 thousand as of December 31, 2021 and 2020, respectively. Contract liabilities from continuing operations related to unfulfilled performance obligations were $74 thousand and $92 thousand as of December 31, 2021 and 2020, respectively, and are recorded in deferred revenue. Contract assets and liabilities classified within discontinuing operations aggregated $75 thousand and $1.9 million as of December 31, 2021. Remaining performance obligations as of December 31, 2021 are expected to be recognized as revenue in the next twelve months.

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, 2021 or 2020. Write-offs for the years ended December 31, 2021 and 2020 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, 2021 and 2020, 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 $100 thousand and $133 thousand as of December 31, 2021 and 2020, respectively. For the years ended December 31, 2021 and 2020, the Company recognized $205 thousand and $190 thousand, respectively, of R&D tax credits as a reduction in payroll tax expenses.

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, 2021 and 2020, four and three customers, respectively, represented 10% or more of the Company's total trade accounts receivable, and in the aggregate, these customers represented 78%, or $262 thousand, and 73%, or $131 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 on March 30, 2021 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, 2021, $1.0 million 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 December 31, 2021.

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 may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by that asset or asset group to its carrying amount. If the carrying amount of the long-lived asset or 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, 2021 and 2020 the Company determined that there were no indicators of impairment and did not recognize any fixed asset impairment use in continuing operations. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values and appraisals, as considered necessary.

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 changed the classification of the *vivo*Pharm business to a held for sale asset in the fourth quarter of 2021 resulting in the recording of a $20.2 million goodwill impairment charge.

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 in interest expense and penalties in selling, general, and administrative expenses.

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 are included in long-term assets of discontinuing operations as of December 31, 2021. Amortization expense in discontinuing operations for these intangible assets aggregated $713 thousand for the year ended December 31, 2021. As a described in Note 3, the Company changed the classification of the *vivo*Pharm business to a held for sale asset in the fourth quarter of 2021 and, therefore, these assets are no longer amortized.

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 $4.3 million and $3.2 million for the years ended December 31, 2021 and 2020, respectively.

Advertising costs: Advertising costs are expensed as incurred. Advertising costs were $34 thousand and $52 thousand for the years ended December 31, 2021 and 2020, respectively.

Stock-based compensation: The Company recognizes all employee stock-based compensation as a cost in the consolidated financial statements. 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.

Recent accounting pronouncements: In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period, and the recognition of deferred tax liabilities for outside basis differences. The amended guidance also clarifies and simplifies other aspects of the accounting for income taxes under ASC Topic 740, *Income Taxes.* The Company adopted this guidance effective January 1, 2021, prospectively, and the adoption of this standard did not have a material impact to the consolidated financial statements and related disclosures.

In January 2020, the FASB issued ASU No. 2020-01, *Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815)*, which clarified that before applying or upon discontinuing the equity method of

accounting for an investment in equity securities, an entity should consider observable transactions that require it to apply or discontinue the equity method of accounting for the purposes of applying the fair value measurement alternative. The amended guidance will become effective for the Company on January 1, 2022. Early adoption is permitted. The Company does not expect this standard will have a material impact on its financial statements.

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*, which provides temporary optional guidance to ease the potential burden of accounting for reference rate reform due to the cessation of the London Interbank Offered Rate, commonly referred to as "LIBOR." The temporary guidance provides optional expedients and exceptions for applying U.S. GAAP to contracts, relationships, and transactions affected by reference rate reform if certain criteria are met. The provisions of the temporary optional guidance are only available until December 31, 2022, when the reference rate reform activity is expected to be substantially complete. When adopted, entities may apply the provisions as of the beginning of the reporting period when the election is made. The Company does not believe this standard will have a material impact on its financial statements and has yet to elect an adoption date.

Note 5. Inventory

The Company's inventory consists of the following:

	December 31, 2021	December 31, 2020
Finished goods	$ 23	$ 40
Work in process	138	121
Raw materials	314	254
Total inventory	$ 475	$ 415

Note 6. Fixed Assets

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

	December 31, 2021	December 31, 2020
Equipment	$ 2,733	$ 2,212
Furniture and fixtures	6	-
Leasehold improvements	251	240
Fixed assets, gross	2,990	2,452
Less accumulated depreciation	(1,970)	(1,421)
Fixed assets, net	$ 1,020	$ 1,031

Depreciation expense from continuing operations for the years ended December 31, 2021 and 2020 was $ 550 thousand and $572 thousand, respectively.

Note 7. Leases

The Company was obligated under finance leases related to certain equipment that were paid in full in 2020. 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, 2020, the Company leased facilities in Maple Grove, Minnesota and in La Jolla, California under arrangements which expire(d) in July 2027 and February 2022, respectively. In 2020, the Company signed a five-year extension of its Maple Grove, Minnesota facility lease. The amendment reduces the Company's rent to $10 thousand per month plus operating costs and extends the lease to July 31, 2027. The monthly rentals are subject to a 2% annual rate increase. The Company recorded an increase to the ROU asset of $373 thousand in 2020 related to this lease amendment. 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.

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

	2021	2020
Operating lease cost	$ 504	$ 466
Finance lease cost:		
Depreciation of ROU assets	$ 35	$ 72
Interest on lease liabilities	8	4
Total finance lease cost:	$ 43	$ 76
Variable lease costs	$ -	$ -
Short-term lease costs	-	-
Total lease continuing operations expense	$ 547	$ 542

Amounts reported in the consolidated balance sheet from continuing operations as of December 31, 2021 and 2020 are as follows:

	2021	2020
Operating leases:		
Operating lease ROU assets, net	$ 673	$ 1,095
Operating lease current liabilities	$ 174	$ 486
Operating lease long-term liabilities	516	627
Total operating lease liabilities	$ 690	$ 1,113
Finance leases:		
Equipment	$ 477	$ 289
Accumulated depreciation	(63)	(289)
Finance leases, net	$ 414	$ -
Current installment obligations under finance leases	$ 157	$ -
Long-term portion of obligations under finance leases	293	-
Total finance lease liabilities	$ 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, 2021 and 2020 (in thousands):

	2021	2020
Cash paid amounts included in the measurement of lease liabilities from continuing operations:		
Operating cash flows used for operating leases	$ 509	$ 594
Financing cash flows used for finance leases	$ (37)	$ (80)
Financing cash flows provided by finance leases	$ 492	$ -

Other supplemental information related to operating and finance leases of the Company's continuing operations is as follows as of December 31, 2021 and 2020:

	2021	2020
Weighted average remaining lease term (in years):		
Operating leases	5.42	5.91
Finance leases	2.75	-
Weighted average discount rate:		
Operating leases	9.88%	10.0%
Finance leases	6.54%	-

Annual payments of lease liabilities under noncancelable leases as of December 31, 2021 are as follows:

	Operating leases	Finance leases
2022	$ 228	$ 181
2023	157	181
2024	136	136
2025	131	-
2026	134	-
Thereafter	84	-
Total undiscounted lease payments	870	498
Less: imputed interest	(180)	48
Total lease liabilities	$ 690	$ 450

Note 8. Income Taxes

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

	2021	2020
United States	$ (18,575)	$ (8,650)
Foreign	-	-
Total loss before income taxes	(18,575)	(8,650)

The Company did not record any current, deferred, or net income tax expense (benefit) in 2021 or 2020. 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:

	2021	2020
Computed "expected" tax expense	$ (3,901)	$ (1,816)
Deferred rate change	84	76
State taxes, net of federal tax effect	(752)	(419)
Non-deductible transaction costs	222	290
Non-deductible interest	664	218
CARES Act PPP loan	-	(153)
R&D tax credit	(238)	-
Other, net	(51)	78
Change in valuation allowance	3,972	1,726
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:

	2021	2020
Deferred tax assets		
Accrued liabilities	$ 47	$ -
Capitalized R&D costs	1,931	1,367
Intangibles	127	-
Stock compensation	160	82
Lease liability	170	291
Loss carryforward	18,144	7,672
Tax credit carryforward	1,406	882
Other temporary differences	4	-
Total gross deferred tax assets	21,989	10,294
Valuation allowance	(21,807)	(9,955)
Total deferred tax assets	$ 182	$ 339
Deferred tax liabilities		
Fixed assets	$ (17)	$ (53)
Lease assets	(165)	(286)
Total gross deferred tax liabilities	$ (182)	$ (339)
Net deferred tax asset	$ -	$ -

The Company assessed that the valuation allowance against its deferred tax assets is still appropriate as of December 31, 2021 and 2020, 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, 2021, the Company has federal net operating loss carryforwards of $
68.8 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 $56.9 million generated in tax years beginning on or after December 31, 2017 do not expire.

The Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was signed into law on March 27, 2020 and provides various tax relief measures to taxpayers impacted by the coronavirus. The Company has reflected the impact of the CARES Act within its financial statements for the years ended December 31, 2021 and 2020, and such impact was not material to our consolidated financial statements.

As of December 31, 2021 and 2020, 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, 2021, the Company was no longer subject to income tax examinations for taxable years before 2018 in the case of U.S. federal taxing authorities, and taxable years generally before 2017 in the case of state and local taxing jurisdictions.

Note 9. Long-Term Debt

Long-term debt consists of the following:

	December 31, 2021	December 31, 2020
Department of Employment and Economic Development loan	$ -	$ 83
Economic Injury Disaster Loan	57	57
8% 2020 Convertible Notes, $7,651 face amount, due July 2022	-	7,651
Total long-term debt before debt issuance costs and debt discount	57	7,791
Less: current portion of long-term debt	-	-
Less: debt discount (net of accretion of $0 and $235, respectively)	-	(952)
Total long-term debt	$ 57	$ 6,839

Future annual principal repayments due on the long-term debt as of December 31, 2021 are as follows:

	Amount
2022	$ -
2023	1
2024	1
2025	1
2026	1
Thereafter	53
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.

As of December 31, 2021 and 2020, the outstanding balance on this loan was $0 and $83 thousand, respectively, recorded within long-term notes payable in the consolidated balance sheets.

If a change in control of the Company's common stock were to occur the earlier of one year from the loan's prepayment or the end of the seven-year loan term, the Company would be required to repay the outstanding principal balance with a 30% premium. 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. 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 143,890 shares of the Company's common stock at an exercise price of $5.9059 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 3,338,944 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 Paycheck Protection Program ("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. The Company determined that the entire PPP loan would be forgiven resulting in no repayment, including the $10 thousand EIDL grant. The $730 thousand of PPP loan forgiveness was recorded as a reduction of operating costs during the second and fourth quarters of 2020. Therefore, the PPP loan is not reflected as a liability as of December 31, 2020. In April 2021, the SBA fully forgave the Company's PPP loan.

Economic Injury Disaster Loan

In 2020 the Company received a $57 thousand Economic Injury Disaster Loan ("EIDL") loan and a $10 thousand grant 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. As noted above, the grant was forgiven as has been recorded as other income.

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.

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.

During the first quarter of 2020, the Company sold 235,877 shares of Series B Preferred stock for net proceeds of $1.25 million.

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, 2021, 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 Investor Warrant on February 23, 2021. Effective with the Merger, the Investor Warrant was exchanged for a warrant to purchase 143,890 shares of the Company's common stock at an exercise price of $5.9059 per share. Prior to this exchange, the 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 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 2,157,686 common stock warrants issued in prior financings. A summary of the outstanding common stock warrants as of December 31, 2021 is as follows:

Issuance Related to:	Exercise Price	Outstanding Warrants	Expiration Dates
2020 Convertible Note	$ 5.91	143,890	Feb 23, 2026
2021 offerings	$ 3.50	1,624,140	Feb 10, 2026 - Aug 3, 2026
Advisory fees	$ 2.42 - $7.59	492,894	Jan 9, 2024 - Oct 28, 2025
Debt	$ 27.60	14,775	Mar 22, 2024
Offering	$ 67.50	3,917	Mar 14, 2022
Debt	$ 450.00	9,185	Oct 17, 2022 - Dec 7, 2022
Debt	$ 300.00	8,112	Oct 17, 2022
Total		2,296,913	

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. In accordance with the Preferred Warrants' terms, upon the consummation of the Merger, the Preferred Warrants were converted and settled for a total of 43,107 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 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 the above Level 3 instruments were exchanged for Vyant Bio equity classified instruments at which time they were no longer classified as Level 3 instruments. Prior to their exchange, all 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 as discontinuing operations and applied held for sale accounting. The Company valued the *vivo*Pharm business equally weighting public company revenue multiples and comparable transaction revenue multiples, which are classified as Level 3 measurements within the fair value hierarchy.

The following tables present changes in fair value of level 3 valued instruments as of and for the years ended December 31, 2021 and 2020:

	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

The following tables present changes in fair value of level 3 valued instruments for the year ended December 31, 2020:

	Embedded Derivative
Balance - January 1, 2020	$ -
Additions	1,187
Measurement adjustments	503
Balance - December 30, 2020	$ 1,690

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, 2021 and 2020:

	December 31, 2021	2020
Net loss from continuing operations	$ (18,575)	$ (8,650)
Net loss from discontinuing operations	(22,284)	-
Net loss	$ (40,859)	$ (8,650)
Basic and diluted weighted average shares outstanding	22,614,449	2,485,968
Basic and diluted net loss per share:		
Continuing operations	$ (0.82)	$ (3.48)
Discontinuing operations	(0.99)	-
Net loss	$ (1.81)	$ (3.48)

The following securities were not included in the computation of diluted shares outstanding for the years ended December 31, 2021 and 2020 because the effect would be anti-dilutive:

	December 31, 2021	2020
Series A Preferred Stock	-	4,611,587
Series B Preferred Stock	-	3,489,470
Series A Warrants	-	48,714
Series B Warrants	-	9,943
Common Stock Warrants	2,296,913	-
Common Stock Options	2,320,097	756,000
2020 Convertible Notes	-	1,678,796
Total	4,617,010	10,594,510

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 191,880 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 4,500,000 of equity-based instruments to officers, key employees, and non-employee consultants. On March 30, 2021, the Company granted 1,151,500 stock options to officers and other employees, 78,090 stock options to independent Board members and a restricted stock unit ("RSU") of 8,676 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, 2021, there were 3,075,734 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, 2021 and 2020 are provided in the following table.

	2021	2020
Valuation assumptions		
Expected dividend yield	0.0%	0.0%
Expected volatility	69.5% -123.0%	85.0% - 88.3%
Expected term (years) - simplified method	5.5 - 6.1	5.2 - 10.0
Risk-free interest rate	0.95% - 1.39%	0.24% - .60%

Stock option activity during years ended December 31, 2021 and 2020 is as follows:

	Number of Options	Weighted average exercise price	Weighted average remaining contractual term
Balance as of January 1, 2020	509,173	$ 1.30	7.4
Granted	592,726	2.01	
Exercised	(75,909)	1.64	
Forfeited	(90,774)	1.76	
Expired	(179,483)	1.02	
Balance as of December 31, 2020	755,733	$ 1.82	8.7
Exercisable as of December 31, 2020	339,987	$ 1.61	6.9
Balance as of January 1, 2021	755,733	$ 1.82	8.7
Granted	1,539,939	4.21	
StemoniX options exchanged for Vyant Bio options	(681,380)	1.84	
Vyant Bio options issued to StemoniX option holders	873,260	1.44	
Options assumed in Merger	55,840	45.95	
Exercised	(37,097)	1.21	
Forfeited	(172,311)	3.69	
Expired	(13,887)	1.92	
Balance as of December 31, 2021	2,320,097	$ 4.19	8.6
Exercisable as of December 31, 2021	635,597	$ 5.58	7.1

The weighted average grant-date fair value of options granted during the years ended December 31, 2021 and 2020 were $3.51 and $1.42, respectively.

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

	December 31,	
	2021	2020
Stock options	$ 973	$ 216
Shares issued for services	30	156
Total	$ 1,003	$ 372

As of December 31, 2021, there was $4.0 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 3.3 years.

Note 14. Segment Information

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 years ended December 31, 2021 and 2020, three customers and two customers accounted for approximately 47% and 39%, respectively, of the consolidated revenue from continuing operations.

During both years ended December 31, 2021 and 2020, approximately 21% 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, 2021 and 2020, are presented in the table below:

	December 31,	
	2021	2020
Customer A	19%	1%

Customer B	18%	13%
Customer C	11%	2%
Customer D	9%	26%

Note 15. Related Party Transactions

In January 2020, a Company officer advanced $25 thousand to the Company. On August 12, 2020, to settle debt and accrued interest aggregating $26 thousand owed to the Company officer, the executive used this amount to exercise a vested Company stock option and was issued 12,693 shares of common stock.

During 2020, a Company officer who was also a Board member, loaned the Company $55 thousand. On July 10, 2020, the loan matured and it was rolled over into a new $55 thousand loan. On August 12, 2020, principal and accrued interest owed to the executive were converted into the 2020 Convertible Notes at the same terms of other third-party investors.

During 2020, related parties including former StemoniX Board members, officers of the Company or their immediate family purchased $44 thousand, or 8,003 shares of Series B Preferred Stock and converted 200,611 shares of Series B Preferred Stock into $1.1 million of the 2020 Convertible Notes. In all instances the terms of these transactions were the same as third-party investors.

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 an Investor Warrant on February 23, 2021. Effective with the Merger, the Investor Warrant was exchanged for a warrant to purchase 143,890 shares of the Company's common stock at an exercise price of $5.9059 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. The arrangements with this third-party collaborator had arms-length terms.

Note 16. Contingencies

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.

Note 17. Subsequent Events

The Company has evaluated subsequent events from the balance sheet date through March 30, 2022, the date at which the financial statements were available to be issued as follows:

Continuing Operations

In January 2022, the Company signed a new lease for its research and development facility in La Jolla, California. The new five-year lease commencing in March 2022 requires monthly payments of $22 thousand.

In February 2022, two employees, including the Company's former Chief Innovation Officer, terminated their employment with the Company. The Company will record a charge of $386 thousand in 2022 related to termination benefits which will be paid in 2022 for these employees.

On March 4, 2022, the Compensation Committee of the Board of Directors approved the granting on March 15, 2022 of (a) 271,719 common stock options to employees which vest equally upon the filing of a new drug application with the U.S. Food and Drug Agency for Rett Syndrome and CDKL5; (b) 88,581 common stock options to non-executive employees pursuant to the 2021 Company bonus plan which vest 50% upon grant and 50% one year after the grant date; and (c) 335,000 common stock options to the Company's executives which vest 25% upon grant with the remaining 75% vesting equally upon the filing of a new drug application with the U.S. Food and Drug Agency for Rett Syndrome and CDKL5. All these option grants have an exercise price of $1.00 per share. The Compensation Committee also modified the vesting criteria for 231,230 common stock options granted to current employees who were also former StemoniX employees to change the vesting criteria from milestone to time-based from the option's initial grant date. The options were originally granted in May and July 2020 and will continue to vest 1/48 per month over a four-year period from their original grant date.

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. Additionally, on March 28, 2022, the Company entered into a registration rights agreement (the "Registration Rights Agreement") with Lincoln Park, pursuant to which the Company agreed to file a registration statement with the Securities and Exchange Commission (the "SEC"), covering the resale of shares of common stock issued to Lincoln Park under the Purchase Agreement. In addition, under the Purchase Agreement, the Company agreed to issue a commitment fee of 405,953 common shares, or the Commitment Shares, as consideration for Lincoln Park entering into the Purchase Agreement. The Company cannot sell any shares to Lincoln Park until the date that a registration statement covering the resale of shares of common stock that have been, and may in the future be, issued to Lincoln Park under the Purchase Agreement is declared effective by the SEC and a final prospectus in connection therewith is filed and all of the other conditions set forth in the Purchase Agreement are satisfied (such date, the "Commencement Date"). Under the Purchase Agreement, the Company may from time to time for 30 months following the Commencement Date, at its discretion, direct Lincoln Park to purchase on any single business day, or a Regular Purchase, up to (i) 50,000 common shares, (ii) 75,000 common shares if the closing sale price of its common shares is not below $1.50 per share on Nasdaq or (iii) 100,000 common shares if the closing sale price of its common shares is not below $2.50 per share on Nasdaq. In addition to Regular Purchases, the Company may also direct Lincoln Park to purchase other amounts as accelerated purchases or as additional accelerated purchases on the terms and subject to the conditions set forth in the Purchase Agreement. In any case, Lincoln Park's commitment in any single Regular Purchase may not exceed $1.0 million absent a mutual agreement to increase such amount. The purchase price per share for each Regular Purchase will be based on prevailing market prices of the Common Stock immediately preceding the time of sale as computed in accordance with the terms set forth in the Purchase Agreement. There are no upper limits on the price per share that Lincoln Park must pay for shares of Common Stock under the Purchase Agreement. The Purchase Agreement may be terminated by the Company at any time after the Commencement Date, at its sole discretion, without any cost or penalty, by giving one business day notice to Lincoln Park to terminate the Purchase Agreement.

Discontinuing Operations

In January 2022, the *vivo*Pharm business signed two leases. The first lease is a five-year extension to the Hershey, Pennsylvania office and laboratory facility. This lease requires monthly payments of $16 thousand which increase 2.5% per annum. The second lease is an eight-year lease to expand the *vivo*Pharm South Australian laboratory facilities. There is not rent due under the lease for the first two years. Commencing in year 3, annual rents are $19 thousand for three years and $29 thousand for the remaining three years of the lease.

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

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") that are designed to ensure that information required to be disclosed in our reports filed under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and no evaluation can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected.

The Company evaluated, under the supervision and with the participation of the principal executive officer and principal financial officer, the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities and Exchange Act of 1934, as amended ("Exchange Act"), as of December 31, 2021, the end of the period covered by this report on Form 10-K. Based on this evaluation, the Company's President and Chief Executive Officer (principal executive officer) and its Chief Financial Officer (principal financial officer) have concluded that its disclosure controls and procedures were not effective at December 31, 2021 because of the material weakness in the Company's internal control over financial reporting related to the accounting for potential impairment of intangible assets that existed at December 31, 2020 had not been remediated by the end of the period covered by this Annual Report on Form 10-K.

Management's Report on Internal Control Over Financial Reporting.

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934.

The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of the Company's management and directors; 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. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in conditions or because of declines in the degree of compliance with policies or procedures. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework (2013)*.

In connection with this assessment, the Company reports the material weakness, as described below, in internal control over financial reporting as of December 31, 2021. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement for the annual or interim financial statements will not be prevented or detected on a timely basis. Because of the material weakness described below, and based on management's assessment, as of December 31, 2021, the Company's internal control over financial reporting was not effective.

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 fourth quarter ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Material Weakness in Internal Control over Financial Reporting

A material weakness in the Company's internal control over financial reporting was reported in "Item 9A. Controls and Procedures" of the Company's Annual Report on Form 10-K for the year ended December 31, 2020 because the Company did not have appropriate controls to forecast revenue and cash flows to support the carrying value of 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 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 our *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 our *vivo*Pharm business as of December 31, 2021, the redesign of this control and ongoing testing of its operational effectiveness will 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. The Company expects to remediate this control in 2022 through enhanced data validation and management review.

Item 9B. Other Information.

On March 28, 2022, Vyant Bio, Inc. (the "Company" or "we") entered into a purchase agreement, dated as of March 28, 2022 (the "Purchase Agreement"), and a registration rights agreement, dated as of March 28, 2022 (the "Registration Rights Agreement"), with Lincoln Park Capital Fund, LLC ("Lincoln Park"), pursuant to which Lincoln Park has committed to purchase up to $15.0 million of the Company's common stock, par value $0.0001 per share (the "Common Stock").

Under the terms and subject to the conditions of the Purchase Agreement, the Company has the right, but not the obligation, to sell to Lincoln Park, and Lincoln Park is obligated to purchase up to $15.0 million of the Company's Common Stock. Such sales of Common Stock by the Company, if any, will be subject to certain limitations set forth in the Purchase Agreement, and may occur from time to time, at the Company's sole discretion, over the 30-month period commencing on the date that the conditions to Lincoln Park's purchase obligation set forth in the Purchase Agreement are satisfied, including that a registration statement covering the resale by Lincoln Park of shares of Common Stock that have been and may be issued to Lincoln Park under the Purchase Agreement, which the Company agreed to file with the Securities and Exchange Commission (the "SEC") pursuant to the Registration Rights Agreement, is declared effective by the SEC and a final prospectus relating thereto is filed with the SEC (the date on which all of such conditions are satisfied, the "Commencement Date").

From and after the Commencement Date, the Company may from time to time on any business day, by written notice delivered by us to Lincoln Park, direct Lincoln Park to purchase up to 50,000 shares of Common Stock on such business day, at a purchase price per share that will be determined and fixed in accordance with the Purchase Agreement at the time we deliver such written notice to Lincoln Park (each, a "Regular Purchase"), provided, however, that the maximum number of shares we may sell to Lincoln Park in a Regular Purchase may be increased to up to 100,000 shares if the closing sale price of the Common Stock on the applicable purchase date is not below $2.50, in each case, subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase

Agreement; provided, however, that Lincoln Park's maximum purchase commitment in any single Regular Purchase may not exceed $1,000,000. The purchase price per share of Common Stock sold in each such Regular Purchase, if any, will be based on prevailing market prices of the Common Stock immediately preceding the time of sale as computed under the Purchase Agreement.

In addition to Regular Purchases, provided that we have directed Lincoln Park to purchase the maximum amount of shares that we are then able to sell to Lincoln Park in a Regular Purchase, we may, in our sole discretion, also direct Lincoln Park to purchase additional shares of Common Stock in "accelerated purchases," and "additional accelerated purchases" as set forth in the Purchase Agreement. The purchase price per share of Common Stock sold in each such accelerated purchase and additional accelerated purchase, if any, will be based on prevailing market prices of the Common Stock at the time of sale as computed under the Purchase Agreement. There are no upper limits on the price per share that Lincoln Park must pay for shares of Common Stock in any purchase under the Purchase Agreement.

The Company will control the timing and amount of any sales of Common Stock to Lincoln Park pursuant to the Purchase Agreement. Lincoln Park has no right to require the Company to sell any shares of Common Stock to Lincoln Park, but Lincoln Park is obligated to make purchases as the Company directs, subject to certain conditions.

Actual sales of shares of Common Stock to Lincoln Park will depend on a variety of factors to be determined by the Company from time to time, including, among others, market conditions, the trading price of the Company's Common Stock and determinations by the Company as to the appropriate sources of funding for the Company and its operations. The net proceeds under the Purchase Agreement to the Company will depend on the frequency and prices at which the Company sells shares of its stock to Lincoln Park. The Company expects that any proceeds received by the Company from such sales to Lincoln Park will be used for working capital and general corporate purposes.

The aggregate number of shares that the Company can issue to Lincoln Park under the Purchase Agreement may in no case exceed 5,796,733 shares (inclusive of the Commitment Shares defined below, and subject to adjustment as described above) of the Common Stock (which is equal to approximately 19.99% of the shares of the Common Stock outstanding immediately prior to the execution of the Purchase Agreement) (the "Exchange Cap"), unless (i) stockholder approval is obtained to issue Purchase Shares above the Exchange Cap, in which case the Exchange Cap will no longer apply, or (ii) the average price of all applicable sales of our Common Stock to Lincoln Park under the Purchase Agreement equals or exceeds $1.2474 per share so that the issuances of Common Stock under the Purchase Agreement do not constitute issuances below the market price on the date of the Purchase Agreement pursuant to the rules of The Nasdaq Capital Market.

The Purchase Agreement prohibits the Company from directing Lincoln Park to purchase any shares of Common Stock if those shares, when aggregated with all other shares of Common Stock then beneficially owned by Lincoln Park (as calculated pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended, and Rule 13d-3 thereunder), would result in Lincoln Park beneficially owning more than 9.99% of the outstanding shares of Common Stock.

There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement, except the Company is prohibited (with certain specified exceptions) from effecting or entering into an agreement to effect an "equity line of credit" or substantially similar transaction whereby an investor is irrevocably bound to purchase the Company's securities over a period of time at a price based on the market price of the Common Stock at the time of each such purchase. Lincoln Park has agreed not to engage in or effect, directly or indirectly, for its own principal account or for the principal account of any of its affiliates, any short sales of the Common Stock or hedging transaction that establishes a net short position in the Common Stock during the term of the Purchase Agreement.

As consideration for Lincoln Park's irrevocable commitment to purchase shares of the Company's Common Stock upon the terms of and subject to satisfaction of the conditions set forth in the Purchase Agreement, the Company agreed to issue 405,953 shares of its Common Stock immediately to Lincoln Park as commitment shares.

The Purchase Agreement and the Registration Rights Agreement contain customary representations, warranties, conditions and indemnification obligations of the parties. The Company has the right to terminate the Purchase Agreement at any time with one business days' notice, at no cost or penalty. During any "event of default" under the Purchase Agreement, Lincoln Park does not have the right to terminate the Purchase Agreement; however, the Company may not initiate any regular or other purchase of shares by Lincoln Park, until such event of default is cured.

The foregoing descriptions of the Purchase Agreement and the Registration Rights Agreement are qualified in their entirety by reference to the full text of such agreements, copies of which are attached hereto as Exhibits 10.34 and 10.35, respectively, and each of which is incorporated herein in its entirety by reference. The representations, warranties and covenants contained in such agreements were made only for purposes of such agreements and as of specific dates, were solely for the benefit of the parties to such agreements and may be subject to limitations agreed upon by the contracting parties.

In the Purchase Agreement, Lincoln Park represented to the Company, among other things, that it is an "accredited investor" (as such term is defined in Rule 501(a)(3) of Regulation D under the Securities Act of 1933, as amended (the "Securities Act")). The securities referred to in this Item 9B are being issued and sold by the Company to Lincoln Park in reliance upon the exemptions from the registration requirements of the Securities Act afforded by Section 4(a)(2) of the Securities Act and Rule 506(b) of Regulation D thereunder.

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)	76	2021
Geoffrey Harris	59	2014
Joanna Horobin	67	2021
Howard McLeod	55	2014
Marcus Boehm	62	2021
Paul Hansen	59	2021
John A. Roberts	63	2021
Yung-Ping Yeh	46	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 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 has served as its Chief Executive Officer. 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 previously served on the boards of The Spectranetics Corporation, Autoimmune, Inc., Axcelis Technologies, Inc., Fischer Imaging Corp., Panacos Pharmaceuticals Inc., NMT Medical Inc., and Quick Study Radiology 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 is an instructor in International Business and a PhD candidate at the Wharton School of Business, and as a Captain and jet pilot in the United States Air Force.

Geoffrey Harris

Geoffrey Harris is the chair of the Company's Audit Committee of the Board and is a managing partner of c7 Advisors (a money management and healthcare advisory firm) since April 2014. Mr. Harris also services on the Company's Compensation Committee of the Board of Directors. 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 data analysis company focused on improving mental health care; PointRight Inc., a privately-held software company; and MoleSafe, Inc., a privately-held company focused on the early detection of melanoma. Mr. Harris graduated from MIT's Sloan School of Management with an MS in Finance Management.

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.

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.

Marcus Boehm

Dr. McLeod serves on the Company's Nominating and Corporate Governance Committee of the Board of Directors. Dr. Boehm has led research and development programs in biotechnology for 29 years. He is co-founder of Escient Pharmaceuticals, Inc. where he has served as Chief Scientific Officer since 2018. Escient Pharmaceuticals, Inc. is a San Diego-based pre-clinical stage company focused on finding novel solutions to auto-reactive clinical conditions with high unmet medical need. Previously, he was co-founder and Chief Technology Officer at Receptos, Inc. from 2009 to 2015, when it was acquired by Celgene Corporation. At Receptos, Inc., Mr. Boehm collaborated to develop treatments for multiple sclerosis, ulcerative colitis, and eosinophilic esophagitis and also led early discovery research and development programs, chemical manufacturing and controls, and supported corporate financing and partnering activities. In 2001, Dr. Boehm served as Vice President, Chemistry at Conforma Therapeutics Corp, where he led a team that discovered and developed a treatment for solid tumors. Dr. Boehm started his industry career with Ligand Pharmaceuticals in 1991 where he held various positions with progressing responsibility. He led chemistry efforts on programs resulting in the discovery and development of treatment of patients with AIDS-related complications. He is a co-author and inventor of over 100 patents and publications in the area of oncology, autoimmune and metabolic diseases. He has served on Board of Directors for StemoniX and previously served as a member of its Scientific Advisory Board. Dr. Boehm received a B.A. in Chemistry from the University of California, San Diego, a Ph.D. in Chemistry from the State University of New York Stony Brook and completed a National Institutes of Health Postdoctoral Fellowship at Columbia University.

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.

John A. Roberts

See biography under "Executive Officers".

Yung-Ping Yeh

Mr. Yeh, MS, MBA, PgMP, PMP, served as our Chief Information Officer from March 2021 to February 2022. Mr. Yeh co-founded StemoniX in April

2014 and had served as its Chief Executive Officer and a Board Member. 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 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 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 and Medical Alley (Minnesota) Boards of Directors.

Executive Officers

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

Executive Officers	Age	Position and Office
John A. Roberts	63	President and Chief Executive Officer
Ralf Brandt	59	President, Discovery & Early Development Sciences
Andrew D. C. LaFrence	59	Chief Financial Officer
Robert Fremeau	67	Chief Scientific Officer

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

John A. Roberts

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.

Ralf Brandt, PhD

Dr. Ralf Brandt, PhD was appointed as the Company's President of Discovery & Early Development Services following the Company's acquisition of *vivo*Pharm Pty Ltd in August 2017. Dr. Brandt co-founded *vivo*Pharm Pty Ltd in 2003 and served as its Chief Executive Officer and Managing Director until August 2017. Previously he was employed at research positions at the National Cancer Institute in Bethesda, MD, USA and at Schering AG, Germany. He led the Tumour Biology program at Novartis Pharma AG, Switzerland and established several transgenic mouse lines developing tumors under the control of oncogenes. He serves as a Member of the Scientific Advisory Board at Receptor Inc. in Toronto Canada. Dr. Brandt serves as a Member of Scientific Advisory Board at Propanc Health Group Corporation at Propanc Health Group Corporation. He received his Licence (BSc in Biochemistry and Animal Physiology) in 1986 and his PhD (in Biochemistry) in 1991 from the Martin-Luther University of Halle-Wittenberg, Germany.

Andrew D.C. LaFrence, CPA

Mr. LaFrence became the Company's Chief Financial Officer upon the close of the Merger. Previously, he served as StemoniX's Chief Financial Officer since August 2019 and, and in March 2020, he also appointed as its Chief Operating Officer. Mr. LaFrence has 38 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 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.

Robert Fremeau, PhD

On October 25, 2021, Robert T. Fremeau, Jr., Ph.D. was appointed Chief Scientific Officer at Vyant Bio. Dr. Fremeau is an experienced R&D leader with 30 years' experience in academia and industry. as well as target validation, translation, and clinical development. Prior to joining Vyant Bio, Dr. Fremeau was a consultant for Stoke Therapeutics and Rarebase, Inc. from January 2021 to November 2021, where he developed therapeutic roadmaps for the discovery of novel therapeutics for rare CNS genetic disorders and automated platforms for high throughput screening of patient-derived induced pluripotent stem cells. Prior to that, Dr. Fremeau was recruited to CAMP4 Therapeutics as an Executive Director in November 2019, to build a new Neuroimmunology Therapeutic Area where he served until January 2021. His team applied novel experimental and computational approaches to elucidate cell- and disease-gene specific regulatory circuitry, including transcription factors, non-coding RNA's, and corresponding cellular signaling pathway, that can be targeted by various therapeutic modalities. Prior to that, Dr. Fremeau served as VP of R&D at AegisCN from 2017-2019 where he was Principal Investigator on an STTR grant from the National Institutes of Neurological Disorders and Stroke to develop apolipoprotein E-mimetics for the treatment of acute brain injury and to identify blood biomarkers for clinical drug effect. In addition, he managed an international collaboration with the National Engineering Research Center for Protein Drugs, Beijing C&N Intl. Sci-tech Co. Ltd., Beijing, China. Prior to that, Dr. Fremeau served as Chief Scientific Officer and co-founder of Resolute Bio from 2015-2016, where he contributed to the development of an innovative platform applying unique computational design and synthetic methods to develop orally bioavailable D-peptides as therapeutic candidates for neurologic disorders. Prior to Resolute Bio, Dr. Fremeau served as Scientific Director in the Department of Neuroscience at Amgen, Inc. from July 2004 until December 2014. At Amgen, he led teams responsible for the identification and prioritization of neuropathic pain and Alzheimer's disease drug targets and was team leader for Amgen's two largest multi-site, cross-functional small molecule drug discovery programs: the beta-secretase program for Alzheimer's disease, and the NaV1.7 program for chronic and neuropathic pain. He further introduced novel research programs to investigate non-amyloid targets for Alzheimer's disease and leveraged his expertise in sodium channel pharmacology to

develop clinically translatable biomarkers. Before moving into biotechnology, Dr. Fremeau was a Visiting Scientist in the Department of Neurology and Physiology at the University of California San Francisco from 1999-2004. Prior to that he was an Assistant Professor of Pharmacology, Cancer Biology and Neurobiology at the Duke University Medical Center. During his academic career, Dr. Fremeau contributed t to the first molecular and functional characterization of the receptors and transporters for the biogenic amine and amino acid neurotransmitters, important targets for drugs with powerful behavioral effects. He is an author on more than 65 peer-reviewed publications in leading journals and multiple patents, and has been a principal investigator on multiple grants from the National Institutes of Health and the National Science Foundation. He served on the Editorial Board of Molecular Pharmacology, the flagship journal for the American Society of Pharmacology and Experimental Therapeutics and has served as a grant reviewer for the National Institutes of Health and the National Science Foundation. He received his BS degree in Microbiology from the University of Maryland, College Park; his PhD degree in Biochemistry from The George Washington University Medical Center; and conducted Postdoctoral training in Molecular Neuroscience at the Columbia University Center for neurobiology and Behavior.

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, 2021, except for the following: (i) a Form 4 for John A. Roberts that was due on May 26, 2021 was filed on May 27, 2021 and (ii) a Form 3 and a Form 4 for Robert Fremeau that were due on November 1, 2021 were filed on November 17, 2021.

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 2020, the Company's two most highly compensated executive officers who were serving as executive officers as of December 31, 2021 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, 2021. 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	2021	$422,692(2)	$175,000	$ -	$993,972	$ -	$1,591,664
Chief Executive Officer and President	2020	$279,260(3)	$ -	$ -	$ -	$ -	$ 279,260
Ralf Brandt	2021	$353,335	$ 50,000	$ -	$397,589	$ 42,148(4)	$ 843,072
President, Discovery & Early Development Services	2020	$353,179	$ -	$ -	$ 44,460	$ 38,620(4)	$ 436,259
Andrew D. C. LaFrence	2021	$244,212(6)	$ -	$ -	$397,589	$ 32,000(8)	$ 673,801
Chief Financial Officer (5)							
Yung-Ping Yeh	2021	$244,295(7)	$ -	$ -	$596,383	$ 28,000(8)	$ 868,678
Chief Information Officer (5)							

(1) Represents the aggregate grant date fair value for grants made in 2021 and 2020 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.

(3) Represents Mr. Robert's gross salary of $350,000 less reimbursements of $70,740 received from the buyer of CGI's biopharma services business prior to the Merger.

(4) Consists of a monthly housing allowance.

(5) Mr. LaFrence's and Mr. Yeh's employment with the Company commenced on March 30, 2021, upon the close of the Merger. Effective February 11, 2022, Mr. Yeh's employment with the Company was terminated. He continues to serve on our Board of Directors.

(6) Represents Mr. LaFrence's $325,000 salary pro-rated after the close of the Merger.

(7) Represents Mr. Yeh's $325,000 salary pro-rated after the close of the Merger. Effective February 11, 2022, Mr. Yeh's employment with the Company was terminated. He continues to serve on our Board of Directors.

(8) Represents payment of pre-Merger deferred compensation to Mr. LaFrence and Mr. Yeh's after the close of the Merger.

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"). 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"). The Brandt Agreement provides for, among other things: (i) an annual base salary of $330,000, (ii) eligibility for an annual cash bonus of up to 30% of base salary, (iii) a one-time grant of a stock option to purchase 3,333 shares of common stock, vesting in equal quarterly increments over a two-year period beginning October 1, 2017, (iv) a one-time grant of 1,000 shares of restricted stock, vesting in equal annual increments over a three-year period beginning October 1, 2017, and 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) monthly payments equal to his base salary immediately prior to such termination for a period of for three months in the event of his death or resignation other than for "good reason", (c) monthly payment equal to his base salary immediately prior to such termination for a period of four months in the event his employment is terminated due to illness, injury or disability, (d) monthly payments 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 without "cause" or Dr. Brandt resigns for "good reason" not in connection with a "change of control", (e) 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". 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. The Brandt Agreement has an initial term of August 15, 2017 to August 14, 2019, and automatically renews for additional one-year terms.

Ping Yeh

The Company has entered into an Employment Agreement with Mr. Yeh (the "Yeh Agreement") on March 30, 2021 setting forth his employment as Chief Innovation Officer. Effective February 11, 2022, Mr. Yeh stepped down as Chief Innovation Officer and the Yeh Agreement was deemed terminated as of that date by the Company without cause. In connection with his separation, Mr. Yeh entered into a separation agreement with the Company effective February 11, 2022, confirming his severance benefits as set forth in the Yeh Agreement. Pursuant to the Yeh Agreement, Mr. Yeh 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 Mr. Yeh'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. Yeh'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. Yeh 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. Yeh 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. Yeh's execution of a release of claims, and except to the extent Mr. Yeh 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 Yeh Agreement provides that Mr. Yeh 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 Agreement, Mr. LaFrence 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 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, 2021.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR END - 2021

	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	4,000(1)	-(1)	$ 60.00	7/10/2026
	1,000(2)	-(2)	$ 75.00	2/21/2027
	-(3)	250,000(3)	$ 4.61	3/29/2031
Ralf Brandt	3,333(4)	-(4)	$ 93.00	8/14/2027
	3,583(5)	1,417(5)	$ 26.70	5/9/2028
	10,000(6)	-(6)	$ 5.53	1/1/2030
	-(3)	100,000(3)	$ 4.61	3/29/2031
Andrew D. C. LaFrence	162,607(7)	28,781(7)	$ 1.56	5/21/2030
	-(8)	38,809(8)	$ 1.56	5/21/2030
	-(3)	100,000(3)	$ 4.61	3/29/2031
Yung-Ping Yeh	-(3)	150,000(3)	$ 4.61	5/12/2022
	-(8)	51,745(8)	$ 1.56	5/21/2030

(1) 83 options vested on July 11, 2016. The remaining options vested in 15 equal quarterly installments of 250 options commencing October 11, 2016 and 167 options vesting on July 11, 2020.
(2) Options vested in 48 equal monthly installments of 21 options commencing one month after the grant date.
(3) Options vest 25% one year from the grant date and in 36 equal monthly installments thereafter.
(4) Options vested in 8 equal quarterly installments of 417 options, commencing on October 1, 2017.
(5) 20% of the options vested one year after the grant date, with the remaining options vest in equal monthly installments of 83 options over the next 48 months.
(6) Options vested in 12 equal monthly installments of 833 options commencing one month after the grant date.
(7) 25% of the options vested on the vesting commencement date of August 30, 2019, with the remaining options vesting in equal monthly installments of 36 over the next 36 months.
(8) 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.

Director Compensation

Non-Employee Director Compensation Policy

Prior to Closing of the Merger

In July 2019, the Company amended its director compensation policy. The Company's amended director compensation policy provides for the following cash compensation to its non-employee directors:

- each non-employee director receives a monthly retainer fee, paid in advance, of $2,500;
- the Company's chairman of the board receives an additional monthly retainer fee of $2,500;
- the chairman of the Company's audit committee receives a monthly retainer fee of $1,000;
- other audit committee members and compensation committee members receive a quarterly retainer fee of $1,000; and
- each non-employee director receives a meeting fee of $250 for each teleconference or $750 for each in-person meeting (exclusive of all travel related reimbursement).

This policy provides for the following equity compensation to the Company's non-employee directors:

- each non-employee director receives a one-time 3,333 share stock option at fair market value on the date of grant, vesting monthly in 12 equal installments over 12 months.

On July 23, 2019, in connection with the adoption of the amended director compensation policy, the Company granted each non-employee director options to purchase 3,333 shares of common stock.

The Company also reimburses non-employee directors for reasonable expenses incurred in connection with attending Board and committee meetings.

After Closing of the Merger

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 2021:

DIRECTOR COMPENSATION

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($) (1)	Option Awards ($) (1)	All Other Compensation ($)	Total ($)
John Fletcher	$ 19,500	$ 100,000	$ 51,285	$ -	$ 170,786
Geoffrey Harris	$ 54,313	$ 60,000	$ 51,285	$ -	$ 165,598
Howard McLeod	$ 47,000	$ 60,000	$ 51,285	$ -	$ 158,285
Joanna Horobin	$ 23,001	$ 60,000	$ 51,285	$ -	$ 134,286
Paul Hansen	$ 18,751	$ 60,000	$ 51,285	$ -	$ 130,036
Marcus Boehm	$ 15,000	$ 60,000	$ 51,285	$ -	$ 126,286

(1) Represents the aggregate grant date fair value for grants made in 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) 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.

Compensation Committee Interlocks and Insider Participation

The Compensation Committee of the Board of Directors is currently composed of the following three non-employee directors: Dr. Boehm, 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, 2022 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, 2022 ("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 28,992,995 shares of common stock issued and outstanding as of March 23, 2022 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	70,916(1)	*
Geoffrey Harris	21,929(2)	*
Howard McLeod	18,130(3)	*
John A. Roberts	150,015(4)	*
Marcus Boehm	164,001(5)	*
Joanna Horobin	18,075(6)	*
Paul Hanson	695,873(7)	2.40%
Ping Yeh	1,772,548(8)	4.66%
Andrew LaFrence	295,585(9)	1.01%
Ralf Brandt	73,055(10)	*
All current executive officers and directors as a group (11 persons)	**2,909,333**	**9.84%**
5% Holders		
The Robert John Petcavich Living Trust	1,699,433	5.86%
Khejri Pte LTD	1,772,548(11)	6.11%
FOD Capital	1,618,825(12)	5.55%

(*) Less than 1%.

(1) Includes 23,264 shares of common stock underlying options exercisable on or before May 15, 2022.

(2) Includes 17,681 shares of common stock underlying options exercisable on or before May 15, 2022.

(3) Includes 17,681 shares of common stock underlying options exercisable on or before May 15, 2022.
(4) Includes 110,208 shares of common stock underlying options exercisable on or before May 15, 2022.
(5) Includes 128,786 common shares owned by the Boehm Family Trust and 35,215 shares of common stock underlying options exercisable on or before May 15, 2022.
(6) Includes 18,075 shares of common stock underlying options exercisable on or before May 15, 2022.
(7) Includes 13,015 shares of common stock underlying options exercisable on or before May 15, 2022.
(8) Includes 1,327,625 shares of common stock owned by the Yung-Ping Yeh Revocable Trust 24,794 shares of common stock underlying options exercisable on or before May 15, 2022.
(9) Includes 64,222 common shares owned by the Trust Agreement of Andrew David Chapman LaFrence and Kimberly Ann Chapman LaFrence dated August 11, 2017, and 231,468 shares of common stock underlying options exercisable on or before May 15, 2022.
(10) Includes 55,722 shares of common stock owned through the Brandt Family Trust. Includes 45,416 shares of common stock underlying options exercisable on or before May 15, 2022.
(11) Includes 15,323 shares of common stock underlying options exercisable on or before May 15, 2022 by Sriram Nadathur, a beneficial owner of Khejri Pte LTD.
(12) Includes 143,890 shares of common stock underlying warrants exercisable on or before May 15, 2022.

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 4,500,000 of equity-based instruments to officers, key employees, and non-employee consultants. The following table provides information as of December 31, 2021 regarding shares of the Company's common stock that may be issued under (i) the 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") 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)	2,328,773	$ 4.19(3)	3,075,734(4)

(1) Does not include any restricted stock as such shares are already reflected in the Company's outstanding shares, does include 8,676 restricted stock units outstanding.
(2) Consists of the 2008 Plan, 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 2008 Plan, 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 2021, 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.

In January 2020, a Mr. Andrew LaFrence, the CFO of StemoniX, Inc., advanced $25 thousand to the Company. On August 12, 2020, to settle debt and accrued interest aggregating $26 thousand owed to Mr. LaFrence, the executive used this amount to exercise a vested Company stock option and was issued 12,693 shares of common stock.

During the quarter ended June 30, 2020, Dr. Robert Petcavich, who was then the StemoniX Chief Scientific Officer and a StemoniX Board member, loaned the Company $55 thousand. On August 12, 2020, principal and accrued interest owed to Dr. Petcavich were converted into the 2020 Convertible Notes at the same terms of other third-party investors.

During 2020, related parties including former StemoniX Board members, officers of the Company or their immediate family members purchased $44 thousand, or 8,003 shares of Series B Preferred Stock. In May 2020, Dr. Petcavich converted 64,000 shares of Series B Preferred Stock into $351 thousand of the 2020 Convertible Notes. In May 2020, Khejri Pte LTD converted 136,611 shares of Series B Preferred Stock into $750 thousand of the 2020 Convertible Notes. In all instances the terms of these transactions were the same as third-party investors.

In 2020, the Company raised approximately $1.5 million from the sale of 2020 Convertible Notes in 2020 from the following related parties: FOD Capital ($689 thousand); Khejri Pte LTD ($400 thousand); Mr. Paul Hansen ($200 thousand); Dr. Petcavich ($150 thousand); Kevin Gunderson ($25 thousand); and Mr. Ping Yeh ($7 thousand).

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 143,890 shares of the Company's common stock at an exercise price of $5.9059 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.

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 four-member board of directors. All of the Company's current directors 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	2021	2020
Audit Fees	$ 569,234	$ 198,203
Audit-Related Fees	40,000	277,000
Tax Fees	-	-
	$ 609,234	$ 475,003

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

Tax fees are associated with tax compliance, tax advice, tax planning and tax preparation services.

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 2021 and 2020 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 2021 and 2020 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 30, 2022

/s/ John A. Roberts

John A. Roberts
President and Chief Executive Officer
(Principal Executive Officer and
duly authorized signatory)

/s/ Andrew D.C. LaFrence

Andrew D.C. LaFrence
Chief Financial Officer
(Principal Financial and 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 John A. Roberts and 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/ John A. Roberts	President and Chief Executive Officer	March 30, 2022
John A. Roberts	*(Principal Executive Officer)*	
/s/ Andrew D.C. LaFrence	Chief Financial Officer	March 30, 2022
Andrew D.C. LaFrence	*(Principal Financial and Accounting Officer)*	
/s/ John Fletcher	Chairman of the Board of Directors	March 30, 2022
John Fletcher		
/s/ Geoffrey Harris	Director	March 30, 2022
Geoffrey Harris		
/s/ Yung-Ping Yeh	Director	March 30, 2022
Yung-Ping Yeh		
/s/ Marcus Boehm	Director	March 30, 2022
Marcus Boehm		
/s/ Howard McLeod	Director	March 30, 2022
Howard McLeod		
/s/ Joanna Horobin	Director	March 30, 2022
Joanna Horobin		
/s/ Paul Hansen	Director	March 30, 2022
Paul Hansen		

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).
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	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).
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).
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).

Exhibit No.	Description
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).
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.
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..
10.31*	Lease Agreement dated July 17, 2017 by and between StemoniX, Inc. and WBL Properties 1 LLC.
10.32*	First Amendment to Lease dated August 10, 2020 by and between StemoniX, Inc. and WBL Properties 1 LLC.
10.33*	Second Amendment to Lease dated September 29, 2020 by and between StemoniX, Inc. and WBL Properties 1 LLC.
10.34*	Purchase Agreement dated March 28, 2022 between Lincoln Park Capital, LLC and Vyant Bio, Inc.
10.35*	Registration Rights Agreement dated March 28, 2022 between Lincoln Park Capital, LLC and Vyant Bio, Inc.
21.1*	List of Subsidiaries
23.1*	Consent of Deloitte & Touche LLP
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 of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
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.