VistaGen Therapeutics, Inc.
Form 10-K
July 02, 2012

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

Form 10-K

x Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended: March 31, 2012
or

o Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Commission file number: 000-54014

VISTAGEN THERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

Nevada	20-5093315
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

384 Oyster Point Boulevard, No. 8
South San Francisco, California 94080
(650) 244-9990
(Address, including zip code, and telephone number, including area code, of registrant's principal executive office)

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

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, par value $0.001 per share

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required

to submit and post such files). Yes x No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

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

Large accelerated filer o	Accelerated filer o	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company x

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

The aggregate market value of the common stock of the registrant held by non-affiliates of the registrant on September 30, 2011, the last business day of the registrant's second fiscal quarter was: $22,210,726.

As of June 28, 2012 there were 17,599,963 shares of the registrant's common stock outstanding.

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Cautionary Note Regarding Forward-Looking Statements

This report contains or incorporates by reference "forward-looking statements" that are based upon current expectations within the meaning of the Private Securities Litigation Reform Act of 1995. VistaGen Therapeutics, Inc., or VistaGen, intends that such statements be protected by the safe harbor created thereby. Forward-looking statements involve risks and uncertainties and VistaGen's actual results and the timing of events may differ significantly from those results discussed in the forward-looking statements. Statements about our current and future plans, expectations and intentions, results, levels of activity, performance, goals or achievements or any other future events or developments constitute forward-looking statements. The words "may", "will", "would", "should", "could", "expect", "plan", "trend", "indication", "anticipate", "believe", "estimate", "predict", "likely" or "potential", or the negative or other variation words or other comparable words or phrases, are intended to identify forward-looking statements. Discussions containing forward-looking statements in this report may be found, among other places, under "Business", "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations". Forward-looking statements are based on estimates and assumptions we make in light of our experience and perception of historical trends, current conditions and expected future developments, as well as other factors that we believe are appropriate and reasonable in the circumstances.

Many factors could cause our actual results, level of activity, performance or achievements or future events or developments to differ materially from those expressed or implied by the forward-looking statements, including, but not limited to, the factors which are discussed in greater detail in this report under the section entitled "Risk Factors". However, these factors are not intended to represent a complete list of the factors that could affect us. The purpose of the forward-looking statements is to provide the reader with a description of management's expectations regarding, among other things, our financial performance and research and development activities and may not be appropriate for other purposes.

Furthermore, unless otherwise stated, the forward-looking statements contained in this report are made as of the date of this report, and we have no intention and undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. The forward-looking statements contained in this report are expressly qualified by this cautionary statement. New factors emerge from time to time, and it is not possible for us to predict which factors may arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause our actual results to differ materially from those contained in any forward-looking statements.

The forward-looking statements in this report include, but are not limited to:

- our plans to develop and use for drug rescue applications novel, clinically predictive heart and liver toxicology screening bioassay systems based on human heart and liver cells derived from our human pluripotent stem cell technology platform, which we refer to as Human Clinical Trials in a Test Tube tm;
- our belief that our human heart and liver cell-based bioassay systems can be utilized to discover, assess, prioritize, and develop new small molecule drug candidates, or efficiently screen chemical compounds and drug candidates for potential therapeutic utility or toxicity;
- our anticipation that recognition of the potential value of a new generation of in vitro bioassay systems based on cells derived from human pluripotent stem cell technology, as well as the potential value of predictive toxicology for drug discovery, development and rescue, including our Human Clinical Trials in a Test Tube tm platform, will increase in the pharmaceutical industry in the coming years;
- our expectation that we will gain access to information, data and research quantity supplies of small molecule drug rescue candidates through publicly available information, collaborations with pharmaceutical companies or selective licensing and acquisition transactions;
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our expectation that we be successful in using our human heart and liver cell-based bioassay systems to identify those factors which make a drug candidate toxic to the human heart or liver, or which cause drug metabolism complications;

- our expectation that we will be able to develop and license or sell to pharmaceutical companies drug rescue variants that are effective and safer than the once-promising drug candidates discovered, developed and ultimately discontinued by pharmaceutical companies;
- our anticipation that, to the extent we license or acquire a drug rescue candidate from a pharmaceutical company instead of accessing the candidate from publicly available information, our drug rescue collaborations will include terms addressing the ownership of the drug rescue variants we expect to generate during our collaborative drug rescue programs, as well as any underlying intellectual property;
- our expectation that we will derive revenues from drug rescue collaborations, including research and development fees, technology access fees, license fees, development milestone payments and royalties from collaborator product sales;
- our expectation that we will license or sell drug rescue variants developed by us, or on our behalf by our medicinal chemistry collaborators, to pharmaceutical companies;
- our ability to produce mature, functional pluripotent stem cell-derived human liver cells, and our ability to develop a clinically predictive liver toxicity and drug metabolism bioassay system using such human liver cells, which we refer to as LiverSafe 3D™;
- our expectation that we will leverage our stem cell biology expertise to develop customized cellular bioassay systems for drug discovery and development applications beyond predicting heart or liver toxicity of drug candidates, including stem cell therapy;
- our expectations with respect to nonclinical stem cell therapy initiatives focused on pluripotent stem cell-derived blood, cartilage, heart, liver and pancreas cells; and
- our expectation that we will complete Phase I clinical development of AV-101 in the United States in 2012.

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Because the factors discussed in this annual report could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us, you should not place undue reliance on any such forward-looking statements. These statements are subject to risks and uncertainties, known and unknown, which could cause actual results and developments to differ materially from those expressed or implied in such statements. Such risks and uncertainties relate, among other factors, to:

- our ability to identify, access and rescue (create a novel, safer chemical variant of) a once-promising small molecule drug candidate discovered and developed by a pharmaceutical company for a potential large market disease or condition but ultimately discontinued by such company due to safety concerns;
- our ability to effectively predict toxicity and drug metabolism issues of small molecule drug candidates;
- our internal validation study of our first clinically predictive toxicology screening bioassay system, CardioSafe 3Dtm for heart toxicity, has not been subject to peer review or third-party validation;
- whether the cellular bioassay systems based on our human pluripotent stem cell biology platform are more efficient or accurate at predicting the heart or liver toxicity of drug candidates than current nonclinical testing models;
- our history of operating losses;
- our ability to obtain substantial additional capital in the future to conduct operations, conduct and sponsor research and development activities, and develop a drug rescue variant pipeline;
- our ability to obtain government grant funding;
- our ability to find collaborators in the pharmaceutical industry to acquire our drug rescue variants generated by using our stem cell technology ;
- our ability to license or acquire drug rescue candidates from pharmaceutical companies on terms and conditions acceptable to us;
- our ability to compete against other companies and research institutions with greater financial and other resources;
- pharmaceutical industry need, acceptance and productive application of our stem cell technology for drug rescue applications;
- our ability to acquire or license potential drug rescue candidates from third-parties on terms and conditions acceptable to us;
- our ability to secure adequate protection for our intellectual property, especially the intellectual property underlying our stem cell technology platform and the small molecule drug rescue variants we expect to be created through our collaboration with our medical chemistry partner;
- our ability (or the ability of our collaborators) to obtain regulatory approval of drug rescue variants; and
- our ability to attract and retain key personnel.

These and other risks are detailed in this report in Part I, Item 1A. Risk Factors.

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EXPLANATORY BACKGROUND INFORMATION

VistaGen Therapeutics, Inc. ("VistaGen" or the "Company") is a biotechnology company focused on using proprietary human pluripotent stem cell technology for drug rescue and cell therapy. VistaGen was incorporated in California on May 26, 1998.

On October 6, 2005, Excaliber Enterprises, Ltd. (Excaliber), a publicly-held company (formerly OTCBB:EXCA), was incorporated under the laws of the State of Nevada to market specialty gift baskets to real estate and health care professionals and organizations through the Internet. Excaliber was not able to generate revenues from this concept and became inactive in 2007.

After assessing both the prospects associated with its original business plan and the strategic opportunities associated with a merger with a business seeking the perceived advantages of being a publicly held corporation, Excaliber's Board of Directors agreed to pursue a strategic merger with VistaGen, as described in more detail below.

On May 11, 2011, Excaliber acquired all outstanding shares of VistaGen Common Stock for 6,836,452 shares of Excaliber Common Stock (the "Merger"), and assumed VistaGen's pre-Merger obligations to contingently issue shares of Common Stock in accordance with stock option agreements, warrant agreements, and a convertible promissory note. As part of the Merger, Excaliber repurchased 5,064,207 shares of its Common Stock from two stockholders for a nominal amount, leaving 784,500 shares of Excaliber Common Stock outstanding at the date of the Merger. The 6,836,452 shares issued to VistaGen stockholders in connection with the Merger represented approximately ninety percent (90%) of the outstanding shares of Excaliber's Common Stock after the Merger. As a result of the Merger, Excaliber adopted VistaGen's business plan and the business of VistaGen became the business of Excaliber. Shortly after the Merger:

- Shawn K. Singh, J.D., Jon S. Saxe, J.D., H. Ralph Snodgrass, Ph.D., Gregory A. Bonfiglio, J.D., and Brian J. Underdown, Ph.D., each a prior director of VistaGen, were appointed as directors of Excaliber;
- Stephanie Y. Jones and Matthew L. Jones resigned as officers and directors of Excaliber;
- The following persons were appointed as officers of Excaliber;
  - Shawn K. Singh, J.D., Chief Executive Officer,
  - H. Ralph Snodgrass, Ph.D., President, Chief Scientific Officer, and
  - A. Franklin Rice, MBA, Chief Financial Officer and Secretary;
- Excaliber's directors approved a two-for-one (2:1) forward stock split of Excaliber's Common Stock;
- Excaliber's directors approved an increase in the number of shares of Common Stock Excaliber is authorized to issue from 200 million to 400 million shares;
- Excaliber changed its name to "VistaGen Therapeutics, Inc."; and
- Excaliber adopted VistaGen's fiscal year-end of March 31, with VistaGen as the accounting acquirer.

VistaGen, as the accounting acquirer in the Merger, recorded the Merger as the issuance of stock for the net monetary assets of Excaliber, accompanied by a recapitalization. This accounting for the transaction was identical to that resulting from a reverse acquisition, except that no goodwill or other intangible assets were recorded. Since June 21, 2011, our Common Stock has traded on the OTC Bulletin Board under the symbol VSTA.

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PART I

Item 1. Business

We are a biotechnology company focused on using stem cell technology as a drug rescue product to generate new, safer variants (drug rescue variants) of once-promising small molecule drug candidates discovered, developed and ultimately discontinued by large pharmaceutical companies due to heart or liver toxicity concerns. We thereby "rescue" their substantial prior investment in research and development.

We believe the U.S. pharmaceutical industry is facing a drug discovery and development crisis. In 2011, the U.S. pharmaceutical industry invested over $49 billion in research and development and the Center for Drug Evaluation and Research (CDER) of the U.S. Food and Drug Administration (FDA) approved a total of 30 novel drugs, known as New Molecular Entities (NMEs). Despite this investment by the pharmaceutical industry, since 2001, the FDA has approved an average of slightly fewer than 24 NMEs per year. We believe the high cost of drug development and relatively low annual number of FDA-approved NMEs is attributable in large part to the cost of failure associated with unexpected heart or liver toxicity. In turn, we believe unexpected heart and liver toxicity often results from limitations of the major toxicological testing systems currently used in the pharmaceutical industry, namely animals and cellular assays based on transformed cell lines and human cadaver cells. We believe better cells make better bioassay systems. And we believe we have better cells.

With our mature human heart cells derived from pluripotent stem cells, we have developed CardioSafe 3D™, a novel three-dimensional (3D) in vitro bioassay system for predicting in vivo cardiac effects, both toxic and non-toxic, of small molecule drug candidates long before they are tested in animals or humans. We are developing LiverSafe 3D™, a human liver cell-based bioassay system for assessing liver toxicity and drug metabolism. Our goal is to use CardioSafe 3D™ and LiverSafe 3D™, for drug rescue to recapture substantial potential value associated with the pharmaceutical industry's prior investment in drug discovery and development of once-promising drug candidates ultimately discontinued due to heart or liver toxicity or drug metabolism issues.

Drug rescue involves the combination of human pluripotent stem cell technology with modern medicinal chemistry to generate new proprietary chemical variants (drug rescue variants) of once-promising small molecule drug candidates discovered and developed by pharmaceutical companies but discontinued before receiving FDA approval due to heart toxicity, liver toxicity or drug metabolism issues. With human heart cells and liver cells derived from pluripotent stem cells, we believe that CardioSafe 3D™ and, when developed, LiverSafe 3D™, will allow us to assess the heart toxicity, liver toxicity and metabolism profile of new drug candidates with greater speed and precision than animal testing and traditional cellular assays currently used in the drug development process. Applying the clinically predictive capabilities of CardioSafe 3D™ and, when developed, LiverSafe 3D™ and medicinal chemistry, we believe we can generate novel, proprietary, safer drug rescue variants of once-promising drug candidates originally discovered and developed by pharmaceutical companies, thereby "rescuing" their substantial prior research and development. We plan to license our drug rescue variants to pharmaceutical companies pursuant to development and marketing arrangements designed to generate revenue for us upon (i) transfer of our drug rescue variants to the pharmaceutical companies, (ii) their achievement of key nonclinical and clinical development and regulatory milestones, and (iii) their commercial sales of drug rescue variants approved for marketing by the FDA and other regulatory authorities. In addition, we are exploring opportunities to advance nonclinical development of potential cell therapy and regenerative medicine pilot programs focused on blood, cartilage, heart, liver and pancreas cells based on the proprietary differentiation and production capabilities of our stem cell technology platform.

We are developing AV-101, an orally available small molecule prodrug candidate aimed at the multi-billion dollar neurological disease and disorders market. AV-101 is currently in Phase Ib development in the U.S. for treatment of neuropathic pain, a serious and chronic condition causing pain after an injury or disease of the peripheral or central

nervous system. Neuropathic pain affects approximately 1.8 million people in the U.S. alone. To date, we have been awarded over $8.3 million of grant funding from the NIH to support preclinical and Phase I clinical development of AV-101. We believe AV-101 may also be a candidate for development as a therapeutic alternative for depression, epilepsy and Parkinson's disease.

Stem Cell Basics

Human stem cells have the potential to develop into mature cells in the human body. Human pluripotent stem cells can differentiate into any of the more than 200 types of cells in the human body, can be expanded readily, and have diverse medical research, drug development and therapeutic applications. We believe pluripotent stem cells can be used to develop numerous cell types and tissues that can mimic complex human biology, including heart and liver biology, for our proposed drug rescue applications.

Pluripotent stem cells are either embryonic stem cells ("ES Cells") or induced pluripotent stem cells ("iPS Cells"). Both ES Cells and iPS Cells can be maintained and expanded in an undifferentiated (undeveloped) state indefinitely. We believe these features make them useful research tools and a source of normal cell populations for creating bioassays to test potential toxicity of drug candidates and for cell therapy.

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Embryonic Stem Cells (ES Cells)

ES Cells are derived from excess embryos that develop from eggs that have been fertilized in an in vitro fertilization ("IVF") clinic and then donated for research purposes with the informed consent of the donors after a successful IVF procedure. ES Cells are not derived from eggs fertilized in a woman's body. ES Cells are isolated when the embryo is approximately 100 cells, thus long before organs, tissues or nerves have developed.

ES Cells have the most documented potential to both self-renew (create large numbers of cells identical to themselves) and differentiate (develop) into any of the over 200 types of cells in the body. ES Cells undergo increasingly restrictive developmental decisions during their differentiation. These "fate decisions" commit the ES Cells to becoming only certain types of mature cells and tissues. At one of the first fate decision points, ES Cells differentiate into epiblasts. Although epiblasts cannot self-renew, they can differentiate into the major tissues of the body. This epiblast stage can be used as the starting population of cells that develop into millions of blood, heart, muscle, liver and pancreas cells, as well as neurons. In the next step, the presence or absence of certain growth factors, together with the differentiation signals resulting from the physical attributes of the culture techniques, induce the epiblasts to differentiate into neuroectoderm or mesendoderm cells. Neuroectoderm cells are committed to developing into cells of the skin and cells of the nervous system. Mesendoderm cells are precursor cells that differentiate into mesoderm and endoderm. Mesoderm cells develop into muscle, bone and blood, among other cell types. Endoderm cells develop into the internal organs such as the heart, liver, pancreas and intestines, among other cell types.

Induced Pluripotent Stem Cells (iPS Cells)

Over the past several years, developments in stem cell research have made it possible to obtain pluripotent stem cell lines from individuals without the use of embryos. iPS Cells are adult cells, typically human skin or fat cells, that have been genetically "reprogrammed" to behave like ES Cells by being forced to express genes necessary for maintaining the pluripotential property of ES Cells. Although researchers are exploring non-viral methods, most iPS Cells are produced by using various viruses to activate and/or express three or four genes required for the immature pluripotential property similar to ES Cells. It is not yet precisely known, however, how each gene actually functions to induce cellular pluripotency, nor whether each of the three or four genes is essential for this reprogramming. Although ES Cells and iPS Cells are believed to be similar in many respects, including their ability to form all cells in the body and to self-renew, scientists do not yet know whether they differ in clinically significant ways or have the same ability to self-renew and make more of themselves.

Although there are remaining questions in the field about the lifespan, clinical utility and safety of iPS Cells, we believe that the biology and differentiation capabilities of ES Cells and iPS Cells are likely to be comparable. There are, however, specific situations in which we may prefer to use iPS technologies based on the relative ease of generating pluripotent stem cells from:

- individuals with specific inheritable diseases and conditions that predispose the individual to respond differently to drugs; or

- individuals with specific variations in genes that directly affect drug levels in the body or alter the manner or efficiency of their metabolism, breakdown and elimination of drugs.

Because they can significantly affect the therapeutic and/or toxic effects of drugs, these genetic variations have an impact on drug development and the ultimate success of the drug. We believe that iPS technologies may allow the rapid and efficient generation of pluripotent stem cells from individuals with the desired specific genetic variation. These stem cells might then be used to develop stem cell-based bioassays, for both efficacy and toxicity screening, which reflect the effects of these genetic variations, as well as for cell therapy applications.

Current Drug Development Process

The current drug development process is designed to assess whether a drug candidate is both safe and effective at treating the disease to which it is targeted. A major challenge in that process is that conventional animal and in vitro testing can, at best, only approximate human biology. A pharmaceutical company can spend millions of dollars to discover, optimize and validate the potential efficacy of a promising lead drug candidate and advance it through nonclinical development, only to see it fail due to unexpected heart or liver toxicity. The pharmaceutical company then often discontinues the development program for the once-promising drug candidate, despite the positive efficacy data indicating its potential therapeutic and commercial benefits. As a result, the pharmaceutical company's significant prior investment may be lost.

It has been estimated that the drug discovery, development and commercialization programs of major pharmaceutical companies have required an average investment of approximately $1 billion before a new drug candidate reaches the market. It is also estimated that about one-third of all potential new drugs candidates fail in preclinical or clinical trials due to safety concerns. In a 2004 white paper entitled "Stagnation or Innovation", the FDA noted that even only a 10% improvement in predicting the failure of a drug due to toxicity before the drug enters clinical trials could, when averaged over a pharmaceutical company's drug development efforts, avoid $100 million in development costs per marketed drug.

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We believe there is an unmet need for human cell-based predictive toxicology screening assays that more closely approximate human biology than do current testing systems used in the pharmaceutical industry. By differentiating pluripotent stem cells into mature, human cells that can then be used as the basis for our customized in vitro toxicology screening bioassay systems, we have the potential to identify human toxicity of drug candidates early in the drug development process, resulting in efficient focusing of resources on those candidates with the highest probability of success. We believe this has the potential to substantially reduce development costs while enabling us to produce effective and safer drugs.

Our Human Clinical Trials in a Test TubeTM Platform for Drug Rescue

We are focused on leveraging ("rescuing") substantial prior investment by pharmaceutical companies in discovery and development of new drug candidates that ultimately were discontinued due to toxicity concerns. By combining our stem cell technology platform, which we refer to as Human Clinical Trials in a Test TubeTM, with medicinal chemistry and 3D "micro-organ" culture systems, we are focused on generating, together with our collaborators, new, safer, proprietary chemical variants of failed drug candidates previously discovered and developed by pharmaceutical companies. We refer to these chemical variants as "drug rescue variants". Our goal is to use our stem cell technology platform to generate drug rescue variants that retain the efficacy of a large pharmaceutical company's once-promising drug candidate, but with reduced toxicity. We believe our drug rescue variants will offer to pharmaceutical companies a potential opportunity to rescue substantial value from their prior investment in once-promising drug candidates which they discontinued due to toxicity concerns.

Proprietary Pluripotent Stem Cell Differentiation Protocols

Through several years of research, our co-founder, Dr. Gordon Keller, has developed proprietary differentiation protocols covering key conditions involved in the differentiation of a pluripotent stem cell. The human cells generated by following these proprietary differentiation protocols are integral to our Human Clinical Trials in a Test TubeTM platform. We believe they support more clinically predictive in vitro bioassay systems than animal testing or cellular assays currently used in drug discovery and development. Our exclusive licenses with National Jewish Health and Mount Sinai School of Medicine relate to proprietary stem cell differentiation protocols developed by Dr. Keller and cover, among other things, the following:

- specific growth and differentiation factors used in the tissue culture medium, applied in specific combinations, at critical concentrations, and at critical times unique to each desired cell type;
- modified developmental genes and the experimentally controlled regulation of developmental genes, which is critical for determining what differentiation path a cell will take; and
- biological markers characteristic of precursor cells, which are committed to becoming specific cells and tissues, and which can be used to identify, enrich and purify the desired mature cell type.

We believe our Human Clinical Trials in a Test TubeTM platform will allow us to assess the heart and liver toxicity profile of new, small molecule drug candidates for a wide range of diseases and conditions, with greater speed and precision than animal testing and cellular assays currently used by pharmaceutical companies in the drug development.

Growth Factors that Direct and Stimulate the Differentiation Process

The proprietary and licensed technologies underlying our Human Clinical Trials in a Test TubeTM platform allow us to direct and stimulate the differentiation process of human pluripotent stem cells. As an example, for pluripotent ES

Cells, the epiblast is the first stage in differentiation. One biological factor that controls the first fate decision of the epiblast is the relative concentrations of serum growth factors and activin, a protein involved in early differentiation and many cell fate decisions. Eliminating serum growth factors and adding the optimal amount of activin is an important step in inducing the reproducible development of functional cells and, in our view, is essential for the development of a robust, efficient, and reproducible model of human biological systems suitable for drug rescue applications. The use of activin in these applications is core to many of the claims in the patent applications underlying our licensed technology. Replacing activin with continuous exposure to serum factors results in an inefficient and variable differentiation into cells of the heart, liver, blood and other internal organs. See “Intellectual Property – Mount Sinai School of Medicine Exclusive Licenses.”

In addition to activin, Dr. Keller’s studies have identified a number of other growth and serum-derived factors that play important roles in the differentiation of ES Cells. Some of the patents and patent applications underlying our licensed technology are directed to the use of a variety of specific growth factors that increase the efficiency and reproducibility of the pluripotent stem cell differentiation process. We have exclusive rights to certain patents and patent applications for the use of growth factor concentrations for ES Cell differentiation that we believe are core and essential for our drug rescue and development applications. See “Intellectual Property – Mount Sinai School of Medicine Exclusive Licenses” and “National Jewish Health Exclusive Licenses.”

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Developmental Genes that Direct and Stimulate the Differentiation Process

For the purpose of creating our Human Clinical Trials in a Test TubeTM platform, we further control the differentiation process by controlling regulation of key developmental genes. By studying natural organ and tissue development, researchers have identified many genes that are critical to the normal differentiation, growth and functioning of tissues of the body. We engineer ES Cells in a way that enables us to regulate genes that have been identified as critical to control and direct the normal development of specific types of cells. We can then mimic human biology in a way that allows us to turn on and off the expression of a selected gene by the addition of a specific compound to a culture medium. By adding specific compounds, we have the ability to influence the expression of key genes that are critically important to the normal biology of the cell.

Cell Purification Approaches

The proprietary protocols we have licensed for our Human Clinical Trials in a Test TubeTM platform also establish specific marker genes and proteins which can be used to identify, enrich, purify, and study important populations of intermediate precursor cells that have made specific fate decisions and are on a specific developmental pathway towards a mature functional cell. These protocols enable a significant increase in the efficiency, reproducibility, and purity of final cell populations. For example, we are able to isolate millions of purified specific precursor cells which, together with a specific combination of growth factors, develop full culture wells of functional, beating human heart cells. Due to their functionality and purity, we believe these cell cultures are ideal for supporting our drug rescue activities.

3D “Micro-Organ” Culture Systems

In addition to standard two-dimensional (“2D”) cultures which work well for some cell types and cellular assays, the proprietary stem cell technologies underlying our Human Clinical Trials in a Test TubeTM platform enable us to grow large numbers of normal, non-transformed, human cells to produce novel in vitro 3D “micro-organ” culture systems. For example, for CardioSafe 3DTM, we grow large numbers of normal, non-transformed, human heart cells in vitro in 3D micro-organ culture systems. The 3D micro-organ cultures induce the cells to grow, mature, and develop 3D cell networks and tissue structures. We believe these 3D cell networks and structures more accurately reflect the structures and biology inside the human body than traditional flat, 2D, single cell layers grown on plastic, that are widely used by pharmaceutical companies today. We believe that the more representative human biology afforded by the 3D system will yield responses to drug candidates that are more predictive of human drug responses.

Medicinal Chemistry

Medicinal chemistry involves designing, synthesizing, modifying and developing small molecule drugs suitable for therapeutic use. It is a highly interdisciplinary science combining organic chemistry, biochemistry, physical chemistry, computational chemistry, pharmacology, and statistics. The combination of medicinal chemistry with the proprietary and licensed stem cell technologies underlying our Human Clinical Trials in a Test TubeTM platform are core components of our drug rescue business model. Working with our strategic medicinal chemistry partner, Synterys, Inc., we are focused on using our stem cell biology to generate a pipeline of effective and safe drug rescue variants of once-promising pharmaceutical company drug candidates in a more efficient and cost-effective manner than the processes currently used for drug development.

Application of Stem Cell Technology to Drug Rescue

By using CardioSafe 3DTM, we intend to identify and optimize a lead drug rescue variant (generated in collaboration with our medicinal chemistry partner) with reduced heart toxicity compared to the once-promising pharmaceutical

company drug candidate. We believe each lead drug rescue variant will be a new drug candidate (to which we expect to have certain intellectual property and commercialization rights) that preserves the therapeutic potential of the original pharmaceutical company drug candidate, and thus retains its potential commercial value to a pharmaceutical company, but substantially reduces or eliminates its heart toxicity risks. We believe that focusing on failed drug candidates that generated positive efficacy data will allow us to leverage a pharmaceutical company's prior investment in discovery and development of the original drug candidate to develop our new lead drug rescue variant. We anticipate that the positive efficacy data relating to the pharmaceutical company's original drug candidate will give us and our medicinal chemistry partner a significant "head start" in our efforts to generate a lead drug rescue variant, resulting in faster, less expensive development of our drug rescue variants than drug candidates discovered and developed using only conventional animal testing and cellular testing systems.

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CardioSafe 3DTM

We have used the proprietary pluripotent stem cell technology underlying our Human Clinical Trials in a Test TubeTM platform to develop CardioSafe 3DTM, a human heart cell-based toxicity screening system that we believe is stable, reproducible and capable of generating data to allow our scientists to more accurately predict the in vivo cardiac effects, both toxic and non-toxic, of drug candidates. A single CardioSafe 3DTM assay is stable for many weeks and can be used for evaluating the heart toxicity of numerous drug candidates.

Our internal validation study was designed to test the ability of CardioSafe 3DTM to generate data to allow our scientists to predict the in vivo cardiac effects of drug candidates. The study included 10 drugs previously approved for human use by the FDA and one experimental research compound widely accepted for studying cardiac electrophysiological effects. We selected these drugs and the research compound because of their known toxic or non-toxic cardiac effects on human hearts that we believe represent the testing characteristics we expect to encounter during our drug rescue programs. More specifically:

- five of the FDA-approved drugs (astemizole, sotalol, cisapride, terfenadine and sertindole) were withdrawn from the market due to heart toxicity concerns;

- the other five FDA-approved drugs (fexofenadine, nifedipine, verapamil, lidocaine and propranolol) are currently available in the U.S. market and demonstrate certain measurable clinical non-toxic cardiac effects, one of which (fexofenadine) is a non-cardiotoxic drug variant (similar in concept to our planned rescued drug variants) of terfenadine (one of the FDA-approved drugs withdrawn from the market due to heart safety concerns); and

- the research compound (E-4031) failed in a small Phase I human clinical study before being discontinued due to heart toxicity concerns.

In our study analysis, we found that results obtained with CardioSafe 3DTM were consistent with the known human cardiac effects of all 10 FDA-approved drugs and the experimental research compound. By using CardioSafe 3DTM, we were also able to distinguish between the cardiac effects of terfenadine (SeldaneTM), withdrawn by the FDA due to cardiotoxicity, and the cardiac effects of the closely related fexofenadine (AllegraTM), the non-cardiotoxic chemical variant of terfenadine.

The results obtained with CardioSafe 3DTM were consistent with the cardiac effects of all five FDA-approved drugs that were later withdrawn from the market due to concerns of heart toxicity. With respect to the results for sertindole, CardioSafe 3DTM indicated the same cardiac effects found in clinical testing that caused it to be withdrawn from the market. However, additional clinical studies have been conducted since the withdrawal of sertindole that have indicated lower incidence of severe cardiac effects than those originally predicted when the drug was withdrawn. As of the date of this report, sertindole has been approved for limited use by humans in the U.S. for the treatment of schizophrenia, but the cardiac effects of sertindole are still being researched.

We believe the results of our CardioSafe 3DTM validation study indicate that CardioSafe 3DTM may be effectively used to identify drug rescue variants with reduced heart toxicity by providing more accurate and timely indications of direct heart toxicity of drug candidates than animal models or cellular assay systems currently used by pharmaceutical companies.

We also believe that the results of the study support a central premise of our drug rescue business model, which is that by using our stem cell-derived human heart and liver bioassay systems at the front end of the drug development process, we have the opportunity to recapture substantial value from prior investment by pharmaceutical companies in

discovery and development of drug candidates that have been put on the shelf due to toxicity concerns. This internal validation study has not been subject to peer review or third party validation. See “Risk Factors”.

LiverSafe 3DTM

Current human stem cell-based liver cell cultures produce proteins produced by and characteristic of immature and adult liver cells, including albumin and liver-specific enzymes important for normal drug metabolism. In addition, these liver cells have biochemical pathways and subcellular structures that are characteristic of normal human liver cells. Although they express many of the mature adult liver proteins and drug processing enzymes, they do not yet express certain essential enzymes at levels typically seen in mature adult liver cells.

Working with Dr. Keller, we anticipate that we will be able to produce pluripotent stem cell-derived normal, non-transformed, fully mature, human liver cells within nine months of the date of this report. We expect these mature liver cells to support development and application of LiverSafe 3DTM as our follow-on bioassay system suitable for use in predicting liver toxicity and metabolism of drug rescue candidates in a manner similar to the way we believe CardioSafe 3DTM can predict heart toxicity. This liver cell research project has been funded, in part, through a grant from the California Institute of Regenerative Medicine (“CIRM”). We anticipate that our future research and development will focus on the improvement of techniques and production of engineered human ES Cell and iPS Cell lines used to develop mature functional liver cells as a biological system for testing drugs and liver repair.

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Our Drug Rescue Business Model

Beginning in mid-2012, we intend to initiate drug rescue programs focused on heart toxicity using our CardioSafe 3DTM human heart cell-based bioassay system. We are focused only on once-promising drug candidates that have positive efficacy data indicating their potential therapeutic and commercial benefits but have been discontinued in development by a large pharmaceutical company due to heart toxicity. The initial goal of our drug rescue program for each drug rescue candidate will be to design and generate, with our medicinal chemistry collaborator, a portfolio of drug rescue variants. We plan to use CardioSafe 3DTM to identify a lead drug rescue variant that demonstrates an improved therapeutic index compared to the pharmaceutical company's original drug candidate (that is, equal or improved efficacy with reduced heart toxicity). We intend to validate that each lead drug rescue variant demonstrates reduced heart toxicity in both CardioSafe 3DTM and in the same nonclinical testing model that the pharmaceutical company used to determine heart toxicity for its original drug candidate. We anticipate that the results of these confirmatory nonclinical safety studies will be drug rescue collaboration milestones demonstrating to a pharmaceutical company the improvement of our lead drug rescue variant compared to its original once-promising drug candidate.

Our Human Clinical Trials in a Test TubeTM Platform for Stem Cell Therapy

Although we believe the best near term use of pluripotent stem cell technology is in the context of drug rescue, we believe the therapeutic potential of pluripotent stem cells for cell therapy and other applications will be significant in the long term.

Working with Dr. Keller and UHN, we are exploring several potential nonclinical proof-of-concept pilot studies with respect to iPS Cell-based cell therapy programs, including blood, cartilage, heart, liver and pancreas cells.

Strategic Transactions and Relationships

Strategic collaborations are a cornerstone of our corporate development strategy. We believe that our strategic outsourcing and sponsoring of application-focused research gives us flexible access to clinical expertise at a lower overall cost than attempting to develop such expertise internally, at least over the twelve-month period following the date of this report. In particular, we collaborate with the types of third parties identified below for the following functions:

- academic research institutions, such as UHN, for stem cell research collaborations;
- CROs, such as Cato Research Ltd., for regulatory and drug development expertise and to identify and assess potential drug rescue candidates; and
- medicinal chemistry companies, such as Synterys, Inc., to analyze drug rescue candidates and generate drug rescue variants.

McEwen Centre for Regenerative Medicine, University Health Network

University Health Network ("UHN") in Ontario, Canada consists of Toronto General Hospital, Toronto Western Hospital and Princess Margaret Hospital. The scope of research and complexity of cases at UHN has made it an international source for discovery, education and patient care. UHN has the largest hospital-based research program in Canada, with major research in transplantation, cardiology, neurosciences, oncology, surgical innovation, infectious diseases, and genomic medicine. UHN's McEwen Centre for Regenerative Medicine (UHN's "McEwen Centre") is the stem cell research affiliate of UHN.

In September 2007, we entered into a sponsored stem cell research and development collaboration with UHN. In December 2010, we extended the collaboration to September 2017. The primary goal of this ten-year collaboration is to leverage the stem cell research, technology and expertise of our co-founder, Dr. Gordon Keller, the Director of UHN's McEwen Centre, to develop and commercialize industry-leading human pluripotent stem cell differentiation technology and bioassay systems for drug rescue and cell therapy applications. This sponsored research collaboration builds on our existing strategic licenses from NJH and MSSM to certain stem cell technologies developed by Dr. Keller, and is directed to multiple stem cell-based research projects, including advancing use of human pluripotent stem cell-derived heart and liver to screen new drugs for potential heart and liver toxicity and for potential cell therapy applications involving blood, cartilage, heart, liver and pancreas cells. In April 2011, we further expanded the scope of the collaboration to include potential cell therapy applications of iPS Cells and cells derived from iPS Cells, create additional options to fund research and development with respect to future research projects relating to therapeutic applications of iPS Cells and certain cells derived from iPS Cells and extend the date that we shall have to exercise our options under the agreement. In October 2011, we amended the collaboration agreement to identify five key programs that will further support our core drug rescue initiatives and potential cell therapy applications. Under the terms of October 2011 amendment, we are committed to make monthly payments of $50,000 from October 2011 through September 2012 to fund these programs. See "Sponsored Research Collaborations and Intellectual Property Rights – University Health Network, McEwen Centre for Regenerative Medicine, Toronto, Ontario", "Intellectual Property – National Jewish Health Exclusive Licenses" and "Intellectual Property – Mount Sinai School of Medicine Exclusive Licenses."

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Cato Research and Cato BioVentures

Cato Research

Cato Research is a contract research and development organization ("CRO"), with international resources dedicated to helping a network of biotechnology and pharmaceutical companies navigate the regulatory approval process in order to bring new biologics, drugs, and medical devices to markets throughout the world. Cato Research has in-house capabilities to assist its sponsors with aspects of the drug development process, including, regulatory strategy, nonclinical and toxicology development, clinical development, data processing, data management, statistical analysis, regulatory applications, including INDs and NDAs, chemistry, manufacturing, and control programs, cGCP, cGLP and cGMP audit and compliance activities, and due diligence review of emerging technologies. Cato Research's senior management team, including co-founders Allen Cato, M.D., Ph.D. and Lynda Sutton, has over 20 years of experience interacting with the FDA and international regulatory agencies and a successful track record of product approvals.

Cato BioVentures

Cato Holding Company, doing business as Cato BioVentures ("Cato BioVentures"), is the venture capital affiliate of Cato Research. For over 20 years, Cato BioVentures and Cato Research have collaborated with biotechnology and pharmaceutical companies to advance a portfolio of platform technologies and product development programs. Cato BioVentures offers its biotechnology and pharmaceutical industry collaborators immediate access to the wide range of CRO services and expertise available from Cato Research, generally on a non-cash or partial-cash basis. Through strategic CRO service agreements with Cato Research, Cato BioVentures invests in therapeutics and medical devices, as well as platform technologies such as our Human Clinical Trials in a Test TubeTM platform, which its principals believe are capable of improving the drug development process and the research and development productivity of a pharmaceutical company. Cato BioVentures often invests in a "bridge mode" to provide companies non-cash access to key CRO services in a manner and at a time that can extend the investee's internal development capabilities and financial runway in order to achieve key value-added developmental and regulatory milestones.

Our Relationship with Cato Research and Cato BioVentures

Cato Research currently serves as the primary CRO providing strategic development and regulatory expertise and services with respect to our development of AV-101. See "Business – AV-101." Cato BioVentures is among our largest institutional investors. A significant portion of the VistaGen securities in Cato BioVentures' equity portfolio was acquired through its investment of CRO Service CapitalTM (that is, CRO services from Cato Research rendered to us on a strategic, non-cash basis) for development of AV-101.

As a result of a number of factors, including:

- the access Cato Research has to drug rescue candidates from its biotechnology and pharmaceutical industry network;
- Cato BioVentures' equity interest in VistaGen; and
- Cato BioVentures' business model which involves partnering with innovators in exchange for an equity interest and product participation rights,

we anticipate that our relationship with Cato BioVentures and Cato Research may provide us with unique strategic access to potential candidates for our drug rescue programs. We further anticipate that this relationship will permit us to leverage the CRO resources of Cato Research and financial community relationships of Cato BioVentures to assist

our efforts to develop lead drug rescue variants internally, should we elect to do so.

United States National Institutes of Health

Since our inception in 1998, the U.S. National Institutes of Health ("NIH") has awarded us a total of $11.3 million in non-dilutive research and development grants, including $2.3 million to support research and development of our Human Clinical Trials in a Test Tube™ platform and, as described below, a total of $8.8 million for nonclinical and Phase 1 clinical development of AV-101 (also referred to in scientific literature as “4-Cl-KYN”). AV-101, our lead small molecule drug candidate, is currently in Phase 1b clinical development in the U.S.

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NIH awarded us $4.2 million in funding for development of AV-101 on June 22, 2009. The NIH increased this award amount to $4.6 million on July 19, 2010, under the Department of Health and Human Services Small Business Innovation Research ("SBIR") Program. The funded development project is entitled "Clinical Development of 4-Cl-KYN to Treat Pain" and is in response to a grant application and request for funding submitted to NIH by us on April 7, 2008, in which a detailed description of a development plan for AV-101 and related budget is provided. The development plan provides that we submit AV-101 to a systematic series of safety tests in human subjects under regulations governed by the FDA. As provided under terms and conditions of the NIH grant award, and as a federal grantee, we are required to adhere to certain federal cost accounting regulations, including limiting the submission of requests for periodic progress payments from the NIH to a reimbursement of actual costs incurred not to exceed a total of $4.6 million, and to completing the specified research plan by June 30, 2012. Other than limiting requests for progress payments to actual costs incurred, and having those costs verified annually by independent auditors, the funding is non-contingent and we retain all intellectual property rights. Prior to the fiscal year ended March 31, 2010, we received and completed similar SBIR grant awards from the NIH totaling approximately $4.2 million for nonclinical development of AV-101.

California Institute for Regenerative Medicine — Stem Cell Initiative (Proposition 71)

The California Institute for Regenerative Medicine (“CIRM”) funds stem cell research at academic research institutions and companies throughout California. CIRM was established in 2004 with the passage of Stem Cell Initiative (Proposition 71) by California voters. The Stem Cell Initiative authorized $3.0 billion in funding for stem cell research in California, including research involving ES Cells, iPS Cells and adult stem cells. As a stem cell company based in California since 1998, we are eligible to apply for and receive grant funding under the Stem Cell Initiative. To date, as more particularly described below, we have been awarded approximately $1.0 million of non-dilutive grant funding from CIRM for stem cell research and development related to liver cells. This research and development focused on the improvement of techniques and the production of engineered human ES Cell lines used to develop mature functional liver cells as a biological system for testing drugs.

CIRM issued us a grant award of $971,558 on April 1, 2009 in response to our grant application submitted to CIRM titled "Development of an hES Cell-Base Assay System for Hepatocyte Differentiation Studies and Predictive Toxicology Drug Screening" on July 9, 2008, in which a detailed stem cell research proposal was presented. The research plan provided that our scientific personnel conduct certain experiments in our laboratories in South San Francisco, California, according to protocols approved in advance by CIRM. The period of funded research period began April 1, 2009 and extended through September 30, 2011, with payments made in advance by CIRM in the amount of $121,444 per quarter starting April 1, 2009. Annual scientific and financial reports to CIRM were required with a final scientific results report due October 1, 2011, and a final financial report due January 1, 2012. At the time of the award in 2009, funding was contingent upon the availability of funds in the California Stem Cell Research and Cures Fund in the California State Treasury. Inventions made under CIRM funding (if any) are owned by the State of California, and if we choose to exclusively license such invention, then our licensing revenue (if any) from the use of such licensed invention shall be subject to royalties equal to 25% of net revenue in excess of $500,000 per year, and revenue from commercial sales of products generated from the use of such license shall be subject to royalties in the range of 2% to 5% of commercial sales. All such royalty obligations are subject to aggregate maximums of three (3) times the amount of CIRM grant fund received leading to such invention.

NuPotential, Inc.

In January 2011, the National Heart, Lung and Blood Institute of the NIH awarded NuPotential, Inc. and VistaGen a grant of $499,765 to accelerate development of safer approaches to generate patient-specific iPS Cells for regenerative medicine, drug discovery and drug rescue.

Most approaches to produce human iPS Cells use retroviruses to activate and/or express multiple key genes, including an oncogene that is associated with production of cancer cells. The use of retroviruses and oncogenes are potentially problematic for clinical applications involving cells derived from iPS Cells due to the significant increased risk of inducing a cancer transformation. NuPotential's innovative cell programming technology involves the use of proprietary small molecule-based cell reprogramming processes for generating patient-specific iPS Cells instead of commonly-used retroviruses or cancer-inducing oncogenes. NuPotential's cell reprogramming technology could represent an improvement in the safety profile of iPS Cells.

The NIH grant is currently supporting further development of patient-specific iPS Cell programming processes by NuPotential, as well as our iPS Cell differentiation protocols and processes focused on the validation and use of the iPS Cells for cell therapy applications and in clinically-relevant bioassays for small molecule drug discovery and drug rescue. We anticipate that these patient-specific iPS Cells may play a key role in our cell therapy initiatives focused on heart and liver disease and cartilage-repair.

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Duke University

In November 2011, we entered into a strategic collaboration with Duke University, one of the premier academic research institutions in the U.S., aimed at combining our complementary expertise in cardiac stem cell technology, electrophysiology and tissue engineering. The initial goal of the collaboration is to explore the potential development of novel, engineered, stem cell-derived cardiac tissues to expand the scope of our drug rescue capabilities focused on heart toxicity. We expect that this collaboration, employing our human stem cell-derived heart cells combined with Duke's technology relating to cardiac electrophysiology and cardiac tissue engineering, will permit us to use micro-patterned cardiac tissue to expand the approaches available to us in our drug rescue programs to quantify drug effects on functional human cardiac tissue.

Synterys, Inc.

In December 2011, we entered into a strategic medicinal chemistry collaboration agreement with Synterys, Inc. ("Synterys"), a medicinal chemistry and collaborative drug discovery company. We believe this important collaboration will further our stem cell technology-based drug rescue initiatives with the support of Synterys' leading-edge medicinal chemistry expertise. In addition to providing flexible, real-time medicinal chemistry services in support of our projected drug rescue programs, we anticipate potential collaborative opportunities with Synterys wherein we jointly identify and develop novel drug rescue opportunities and advance them in preclinical development.

Vala Sciences, Inc.

In October 2011, we entered into a strategic drug screening collaboration arrangement with Vala Sciences, Inc. ("Vala"), a biotechnology company developing and selling next-generation cell image-based instruments, reagents and analysis software tools. The goal of the collaboration is to advance drug safety screening methodologies in the most clinically relevant human in vitro bioassay systems currently available to researchers. Through the collaboration, Vala will use its Kinetic Image Cytometer platform to demonstrate both the suitability and utility of our human pluripotent stem cell derived-cardiomyocytes for screening new drug candidates for potential cardiotoxicity over conventional in vitro screening systems and animal models. Cardiomyocytes are the muscle cells of the heart that provide the force necessary to pump blood throughout the body, and, as such, are the targets of most of the drug toxicities that directly affect the heart. Many of these drug toxicities result in either arrhythmia (irregular, often fatal, beating of the heart) or reduced ability of the heart to pump the blood necessary to maintain normal health and vigor. Accurate, sensitive and reproducible measurement of electrophysiological responses of stem cell-derived cardiomyocytes to new drug candidates is a key element of our CardioSafe 3D™ drug rescue programs.

AV-101

We are currently working with Cato Research and other drug development service providers to develop AV-101, also known as "L-4-chlorokynurenine" and "4-Cl-KYN". AV-101 is a prodrug candidate for the treatment of neuropathic pain. Our AV-101 IND application on file at the FDA covers our initial Phase I clinical development of the drug candidate for neuropathic pain. Neuropathic pain is a serious and chronic condition causing pain after an injury or disease of the peripheral or central nervous system. The neuropathic pain market is large, including approximately 1.8 million people in the U.S. alone.

We believe the safety studies done in the initial Phase I clinical study of AV-101 will support development of AV-101 for other indications, including epilepsy and neurodegenerative diseases, such as Huntington's and Parkinson's. To date, the NIH has provided us with grant funding for substantially all of our AV-101 development expenses, including $8.2 million for preclinical and clinical development. We successfully completed our initial Phase I safety study of AV-101 for neuropathic pain in December 2010. We expect to complete our second AV-101 Phase I safety study

during 2012.

AV-101 is an orally available prodrug that is converted in the brain into an active metabolite, 7-chlorokynurenic acid ("7-Cl-KYNA"), which regulates the N-methyl-D-aspartate ("NMDA") receptors. 7-Cl-KYNA is a synthetic analogue of kynurenic acid, a naturally occurring neural regulatory compound, and is one of the most potent and selective blockers of the regulatory GlyB-site of the NMDA receptor. In preclinical studies, AV-101 has very good oral bioavailability, is rapidly and efficiently transported across the blood-brain barrier, and is converted into 7-Cl-KYNA in the brain and spinal cord, preferentially, at the site of seizures and potential neural damage.

The effect of AV-101 on chronic neuropathic pain due to inflammation and nerve damage was assessed in rats by using the Chung nerve ligation model. AV-101 effects were compared to either saline and MK-801, or gabapentin (NeurontinTM) as positive controls. Similarly to the therapeutic effects seen in the acute formalin and thermal pain models, AV-101 had a positive effect on chronic neuropathic pain in the Chung model that were greater than two (2) standard deviations of the control, with no adverse behavioral observations. As expected, MK-801 and gabapentin also demonstrated reduced pain readouts in the Chung model. The effects observed by AV-101 in both the acute and chronic neuropathic pain model systems was dose dependent, and was not associated with any side effects at the range of doses administered. Preclinical AV-101 data demonstrated the potential clinical utility of AV-101 as an analgesic.

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Intellectual Property

Intellectual Property Rights Underlying our Human Clinical Trials in a Test TubeTM Platform

We have established our intellectual property rights to the technology underlying our Human Clinical Trials in a Test TubeTM platform through a combination of exclusive and non-exclusive licenses, patent, and trade secret laws. To our knowledge, we are the first stem cell company focused primarily on stem cell technology-based drug rescue. We have assembled an intellectual property portfolio around the use of pluripotent stem cell technologies in drug discovery and development and with specific application to drug rescue. The differentiation protocols we have licensed direct the differentiation of pluripotent stem cells through:

- a combination of growth factors (molecules that stimulate the growth of cells);
- modified developmental genes; and
- precise selection of immature cell populations for further growth and development.

By influencing key branch points in the cellular differentiation process, our pluripotent stem cell technologies can produce fully-differentiated, non-transformed, highly functional human cells in vitro in an efficient, highly pure and reproducible process.

As of the date of this report, we either own or have licensed 38 issued U.S. patents and 19 U.S. patent applications and certain foreign counterparts relating to the stem cell technologies that underlie our Human Clinical Trials in a Test TubeTM platform. Our material rights and obligations with respect to these patents and patent applications are summarized below:

Licenses

National Jewish Health Exclusive Licenses

We have exclusive licenses to seven issued U.S. patents held by NJH. No foreign counterparts to these U.S. patents and patent application have been obtained. These U.S. patents contain claims covering composition of matter relating to specific populations of cells and precursors, methods to produce such cells, and applications of such cells for ES Cell-derived immature pluripotent precursors of all the cells of the mesoderm and endoderm lineages. Among other cell types, this covers cells of the heart, liver, pancreas, blood, connective tissues, vascular system, gut and lung cells.

Under this license agreement, we must pay to NJH 1% of our total revenues up to $30 million in each calendar year and 0.5% of all revenues for amounts greater than $30 million, with minimum annual payments of $25,000. Additionally, we are obligated under the agreement to make certain royalty payments on sales of products based on NJH's patents or the sublicensing of such technology. The royalty payments are subject to anti-stacking provisions which reduce our payments by a percentage of any royalty payments and fees paid to third parties who have licensed necessary intellectual property to us. This agreement remains in force for the life of the patents so long as neither party elects to terminate the agreement upon the other party's uncured breach or default of an obligation under the agreement. We also have the right to terminate the agreement at any time without cause.

Mount Sinai School of Medicine Exclusive Licenses

We have an exclusive, field restricted, license to two U.S. patents and two U.S. patent applications, and their foreign counterparts filed by MSSM. Foreign counterparts have been filed in Australia, Canada, Europe (two), Japan, Hong

Kong and Singapore. Two of the U.S. applications have been issued and the foreign counterparts in Australia and Singapore have been issued, while the two counterparts in Europe are pending. These patent applications have claims covering composition of matter relating to specific populations of cells and precursors, methods to produce such cells, and applications of such cells, including:

- the use of certain growth factors to generate mesoderm (that is, the precursors capable of developing into cells of the heart, blood system, connective tissues, and vascular system) from human ES Cells;

- the use of certain growth factors to generate endoderm (that is, the precursors capable of developing into cells of the liver, pancreas, lungs, gut, intestines, thymus, thyroid gland, bladder, and parts of the auditory system) from human ES Cells; and

- applications of cells derived from mesoderm and endoderm precursors, especially those relating to drug discovery and testing for applications in the field of in vitro drug discovery and development applications.

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This license agreement requires us to pay annual maintenance fees, a patent issue fee and royalty payments based on product sales and services that are covered by the MSSM patent applications, as well as for any revenues received from sublicensing. Any drug candidates that we develop will only require royalty payments to the extent they require the practice of the licensed technology. To the extent we incur royalty payment obligations from other business activities, the royalty payments are subject to anti-stacking provisions which reduce our payments by a percentage of any royalty payments or fees paid to third parties who have licensed necessary intellectual property to us. The license agreement will remain in force for the life of the patents so long as neither party terminates the agreement for cause (i) due to a material breach or default in performance of any provision of the agreement that is not cured within 60 days or (ii) in the case of failure to pay amounts due within 30 days.

Wisconsin Alumni Research Foundation ("WARF") Non-Exclusive License

We have non-exclusive licenses to 28 issued stem cell-related U.S. patents, 14 stem cell-related U.S. patent applications, of which two have been allowed, and certain foreign counterparts held by WARF, for applications in the field of in vitro drug discovery and development. Foreign counterparts have been filed in Australia, Canada, Europe, China, India, Hong Kong, Israel, Brazil, South Korea, India, Mexico, and New Zealand. The subject matter of these patents includes specific human ES Cell lines and composition of matter and use claims relating to human ES Cells important to drug discovery, and drug rescue screening. We have rights to:

- use the technology for internal research and drug development;
- provide discovery and screening services to third parties; and
- market and sell research products (that is, cellular assays incorporating the licensed technology).

This license agreement requires us to make royalty payments based on product sales and services that incorporate the licensed technology. We do not believe that any drug rescue candidates to be developed by us will incorporate the licensed technology and, therefore, no royalty payments will be payable. Nevertheless, there is a minimum royalty of $20,000 per calendar year. There are also milestone fees related to the discovery of therapeutic molecules, though no royalties are owed on such molecules. The royalty payments are subject to anti-stacking provisions which reduce our payments by a percentage of any royalty payments paid to third parties who have licensed necessary intellectual property to us. The agreement remains in force for the life of the patents so long as we pay all monies due and do not breach any covenants, and such breach or default is uncured for 90 days. We may also terminate the agreement at any time upon 60 days' notice. There are no reach through royalties on customer-owned small molecule or biologic drug products developed using the licensed technologies.

Our Patents

We have filed two U.S. patent applications on liver stem cells and their applications in drug development relating to toxicity testing; one patent has issued and a second patent application is pending. Of the related international filings, European, Canadian and Korean patents were issued. The European patent has been validated in 11 European countries. We have filed a U.S. patent application, with foreign counterpart filing in Canada and Europe, directed to methods for producing human pluripotent stem cell-derived endocrine cells of the pancreas, with a specific focus on beta-islet cells, the cells that produce insulin, and their uses in diabetes drug discovery and screening. In addition, we have filed an international patent application under the Patent Cooperation Treaty ("PCT") on a novel, non-viral, approach to produce iPS Cells.

The material patents currently related to the generation of human heart and liver cells for use in connection with our drug rescue activities are set forth below:

Territory	Patent No.	General Subject Matter	Expiration
US	7,763,466	Method to produce endoderm cells	May 20, 2025
US	7,955,849	Method of enriching population of mesoderm cells	May 19, 2023

Trade Secrets

We rely, in part, on trade secrets for protection of some of our intellectual property. We attempt to protect trade secrets by entering into confidentiality agreements with third parties, employees and consultants. Our employees and consultants also sign agreements requiring that they assign to us their interests in patents and copyrights arising from their work for us.

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Sponsored Research Collaborations and Intellectual Property Rights

University Health Network, McEwen Centre for Regenerative Medicine, Toronto, Ontario

We are currently sponsoring stem cell research by our co-founder, Dr. Gordon Keller, Director of the UHN's McEwen Centre, focused on developing improved methods for differentiation of cardiomyocytes (heart cells) from pluripotent stem cells, and their uses as biological systems for drug discovery and drug rescue, as well as cell therapy. Pursuant to our sponsored research collaboration agreement with UHN, we have the right to acquire exclusive worldwide rights to any inventions arising from these studies under pre-negotiated terms. Such pre-negotiated terms provide for royalty payments based on product sales that incorporate the licensed technology and milestone payments based on the achievement of certain events. Any drug rescue candidates that we develop will not incorporate the licensed technology and, therefore, will not require any royalty payments. To the extent we incur royalty payment obligations from other business activities, the royalty payments will be subject to anti-stacking provisions which reduce our payments by a percentage of any royalty payments paid to third parties who have licensed necessary intellectual property to us. These licenses will remain in force for so long as we have an obligation to make royalty or milestone payments to UHN, but may be terminated earlier upon mutual consent, by us at any time, or by UHN for our breach of any material provision of the license agreement that is not cured within 90 days. We also have the exclusive option to sponsor research for similar cartilage, liver, pancreas and blood cell projects with similar licensing rights.

The sponsored research collaboration agreement with UHN, as amended, has a term of ten years, ending on September 18, 2017. The agreement is subject to renewal upon mutual agreement of the parties. The agreement may be terminated earlier upon a material breach by either party that is not cured within 30 days. UHN may elect to terminate the agreement if we become insolvent or if any license granted pursuant to the agreement is prematurely terminated. We have the option to terminate the agreement if Dr. Keller stops conducting his research or ceases to work for UHN.

AV-101-Related Intellectual Property

We have exclusive licenses to issued U.S. patents related to the use and function of AV-101, and various CNS-active molecules related to AV-101. These patents are held by the University of Maryland, Baltimore, the Cornell Research Foundation, Inc. and Aventis, Inc. The principle U.S. method of use patent related to AV101 expired in February 2011. Foreign counterparts to that U.S. patent expired in February 2012. Our commercial protection strategy with respect to AV-101 involves the New Drug Product Exclusivity provided by the FDA under section 505(c)(3)(E) and 505(j)(5)(F) of the Federal Food, Drug, and Cosmetic Act ("FDCA"). The FDA's New Drug Product Exclusivity is available for new chemical entities ("NCEs") such as AV-101, which, by definition, are innovative and have not been approved previously by the FDA, either alone or in combination. The FDA's New Drug Product Exclusivity protection provides the holder of an FDA-approved new drug application ("NDA") five (5) years of protection from new competition in the U.S. marketplace for the innovation represented by its approved new drug product. This protection precludes FDA approval of certain generic drug applications under section 505(b)(2) of the FDCA, as well certain abbreviated new drug applications ("ANDAs"), during the five (5)-year exclusivity period, except that such applications may be submitted after four (4) years if they contain a certification of patent invalidity or non-infringement.

Under the terms of the license agreement, we may be obligated to make royalty payments on 2% of net sales of products using the unexpired patent rights, if any, including products containing compounds covered by the patent rights. Additionally, we may be required to pay a 1% royalty on net sales of combination products that use unexpired patent rights, if any, or contain compounds covered by the patent rights. Consequently, future sales of AV-101 may be subject to a 2% royalty obligation. There are no license, milestone or maintenance fees under the agreement. The agreement remains in force until the later of: (i) the expiration or invalidation of the last patent right; and (ii) 10 years after the first commercial sale of the first product that uses the patent rights or contains a compound covered by the

patent rights. This agreement may also be terminated earlier at the election of the licensor upon our failure to pay any monies due, our failure to provide updates and reports to the licensor, our failure to provide the necessary financial and other resources required to develop the products, or our failure to cure within 90 days any breach of any provision of the agreement. We may also terminate the agreement at any time upon 90 days' written notice so long as we make all payments due through the effective date of termination.

Competition

We believe that our stem cell technology platform, Human Clinical Trials in a Test TubeTM, is capable of being competitive in growing markets for pluripotent stem cell technology-based drug discovery, development and rescue, as well as cell therapy and other commercial applications. We have elected to focus a substantial portion of our resources on stem cell technology-based drug rescue.

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We believe that the stem cell technologies underlying our Human Clinical Trials in a Test TubeTM platform and our primary focus on drug rescue opportunities provide us substantial competitive advantages associated with application of human biology at the front end of the drug development process, long before animal and human testing. Although we believe that our model for the application of pluripotent stem cell technology for drug rescue is novel, competition may arise or otherwise increase considerably as the use of stem cell technology for drug discovery, development and rescue, as well as cell therapy or regenerative medicine continues to become more widespread throughout the academic research community and pharmaceutical and biotechnology industries.

Competition may arise from academic research institutions and biotechnology companies that seek to develop cell therapy products and to sell in vitro heart cell, liver cell and other cellular assays and cell populations, including stem cell-based assays and stem cell-derived cells for predictive toxicity screening, including Advanced Cell Technology, Athersys, BioTime, Cellectis, Cellular Dynamics, California Stem Cell, Inc., Cellerant Therapeutics, Cellzdirect, Cambrex, Cytori, HemoGenix, International Stem Cell, iPierian , Neuralstem, Organovo Holdings, PluriStem, Stem Cells, Inc. and Stemina BioMarker Discovery, Inc., and possibly others. Pharmaceutical companies, such as GlaxoSmithKline, Novartis, Pfizer and Roche among others, may also develop their own stem cell-based research programs. We anticipate that acceptance and use of pluripotent stem cell technology, including our Human Clinical Trials in a Test TubeTM platform, will increase at pharmaceutical and biotechnology companies in the future, providing us with diverse strategic partnering opportunities.

With respect to AV-101, we believe that a range of pharmaceutical and biotechnology companies have programs to develop small molecule drug candidates for the treatment of neuropathic pain, depression, epilepsy, Parkinson’s disease and other neurological conditions and diseases, including Abbott Laboratories, GlaxoSmithKline, Johnson & Johnson, Novartis, and Pfizer. We expect that AV-101 will have to compete with a variety of therapeutic products and procedures.

Government Regulation

United States

With respect to our stem cell research and development in the U.S., the U.S. government has established requirements and procedures relating to the isolation and derivation of certain stem cell lines and the availability of federal funds for research and development programs involving those lines. All of the stem cell lines that we are using were either isolated under procedures that meet U.S. government requirements and are approved for funding from the U.S. government, or were isolated under procedures that meet U.S. government requirements and are approved for use by regulatory bodies associated with the CIRM.

With respect to drug development, government authorities at the federal, state and local levels in the U.S. and other countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, promotion, advertising, distribution, marketing, pricing and export and import of pharmaceutical products such as those we are developing. In the U.S., pharmaceuticals, biologics and medical devices are subject to rigorous FDA regulation. Federal and state statutes and regulations in the United States govern, among other things, the testing, manufacture, safety, efficacy, labeling, storage, export, record keeping, approval, marketing, advertising and promotion of our potential drug rescue variants. The information that must be submitted to the FDA in order to obtain approval to market a new drug varies depending on whether the drug is a new product whose safety and effectiveness has not previously been demonstrated in humans, or a drug whose active ingredient(s) and certain other properties are the same as those of a previously approved drug. Product development and approval within this regulatory framework takes a number of years and involves significant uncertainty combined with the expenditure of substantial resources.

Canada

In Canada, stem cell research and development is governed by two policy documents and by one legislative statute: the Guidelines for Human Pluripotent Stem Cell Research (the "Guidelines") issued by the Canadian Institutes of Health Research; the Tri-Council Statement: Ethical Conduct for Research Involving Humans (the "TCPS"); and the Assisted Human Reproduction Act (the "Act"). The Guidelines and the TCPS govern stem cell research conducted by, or under the auspices of, institutions funded by the federal government. Should we seek funding from Canadian government agencies or should we conduct research under the auspices of an institution so funded, we may have to ensure the compliance of such research with the ethical rules prescribed by the Guidelines and the TCPS.

The Act subjects all research conducted in Canada involving the human embryo, including ES Cell derivation (but not the stem cells once derived), to a licensing process overseen by a federal licensing agency. However, as of the date of this report, the provisions of the Act regarding the licensing of ES Cell derivation were not in force

We are not currently conducting stem cell research in Canada. We are, however, sponsoring stem cell research by Dr. Gordon Keller at UHN's McEwen Centre. We anticipate conducting stem cell research (with both ES Cells and iPS Cells), in collaboration with Dr. Keller and is research team, at UHN during 2012 byond pursuant to our long term sponsored research collaboration with Dr. Keller and UHN. Should the provisions of the Act come into force, we may have to apply for a license for all ES Cell research we may sponsor or conduct in Canada and ensure compliance of such research with the provisions of the Act.

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Foreign

In addition to regulations in the U.S., we may be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products outside of the U.S. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country, and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Subsidiaries and Inter-Corporate Relationships

VistaGen Therapeutics, Inc., a California corporation, is our wholly-owned subsidiary and has the following two wholly-owned subsidiaries: VistaStem Canada Inc., a corporation incorporated pursuant to the laws of the Province of Ontario, intended to facilitate our stem cell-based research and development and drug rescue activities in Ontario, Canada including our collaboration with Dr. Keller and UHN; and Artemis Neuroscience, Inc., a corporation incorporated pursuant to the laws of the State of Maryland and focused on the clinical development of AV-101. The operations of VistaGen Therapeutics, Inc., a California corporation, and each of its two wholly-owned subsidiaries are managed by our senior management team based in South San Francisco, California.

Item 1A. Risk Factors

Risks Related to Our Financial Position and Need for Additional Capital

We have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Since inception, we have incurred significant operating losses. Our accumulated loss was $54.8 million and $42.6 million, and our stockholders' deficit was $5.7 million and $32.9 million as of March 31, 2012 and 2011, respectively.

To date, we have generated approximately $16.2 million of revenue from grant awards and strategic collaborations. We have financed our operations primarily through private placements of our securities. We have devoted substantially all of our efforts to research and development. We expect to incur significant expenses and significant operating losses for the foreseeable future. The net losses we incur may fluctuate from quarter to quarter. We anticipate that our expenses will increase substantially if and as we:

- Continue our research and development of our stem cell technology platform;
- Seek to rescue once-promising drug candidates discontinued in development by pharmaceutical companies due to heart or liver toxicity;
- Acquire or in-license products or technologies;
- Maintain, expand and protect our intellectual property portfolio;
- Hire additional scientific and technical personnel; and
- Add operational, financial and management information systems and personnel to support our drug rescue activities and regulatory compliance requirements relating to being a reporting company.

To become and remain profitable we must develop and commercialize, either directly or, more likely, through collaborative arrangements with pharmaceutical companies, a product or products with significant market potential. This will require us to be successful in a range of challenging activities, including nonclinical testing and clinical trials of our drug rescue variants, obtaining marketing approval for these product candidates and

manufacturing, marketing and selling those products for which we or our prospective pharmaceutical partners may obtain marketing approval. We and our collaborators may never succeed in these activities and, even if we do, may never generate revenues that are significant or large enough to achieve profitability. If we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become or remain profitable would decrease the value of the company and could impair our ability to raise capital, maintain our research, development and drug rescue efforts, expand our business or continue our operations. A decline in the value of the company could also cause you to lose all or part of your investment.

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We will need substantial additional funding. If we are unable to raise capital when needed, we would be forced to delay, reduce or eliminate our research, drug rescue and development programs.

We expect our expenses to increase in connection with our ongoing activities, particularly as we launch and continue our drug rescue programs. Furthermore, we will incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. These funds, if available, may be from one or more public or private stock offerings, issuance of promissory notes, borrowings under bank or lease lines of credit, grants awards or other sources. Any additional financing may not be available on a timely basis on terms acceptable to us, or at all. Our ability to obtain such financing may be impaired by current economic conditions and/or a lack of liquidity in the credit or stock markets. Such financing, if available, may also be dilutive to stockholders or may require us to grant a lender a security interest in our assets. The amount of money we will need will depend on many factors, including:

- revenues, if any, generated from collaborations with pharmaceutical companies involving the development or licensing of customized cellular bioassays or our drug rescue variants;
- expenses we incur in developing and licensing our drug rescue variants;
- the commercial success of our research and development efforts; and
- the emergence of competing scientific and technological developments and the extent to which we acquire or in-license other products and technologies.

If we are unable to secure additional funding or adequate funds are not available, we may have to discontinue operations, delay, reduce or eliminate research and development programs, including drug rescue programs, license to third parties the rights to commercialize products or technologies that we would otherwise seek to commercialize, or any combination of these activities. Any of these results would materially harm our business, financial condition, and results of operations, and there can be no assurance that any of these results will result in cash flows that will be sufficient to fund our current or future operating needs.

We do not have any committed sources of additional capital. Additional financing through strategic collaborations, public or private equity financings, capital lease transactions or other financing sources may not be available on acceptable terms, or at all. The receptivity of the public and private equity markets to proposed financings is substantially affected by the general economic, market and political climate and by other factors which are unpredictable and over which we have no control. Additional equity financings, if we obtain them, could result in significant dilution to our stockholders. Further, in the event that additional funds are obtained through arrangements with collaborators, these arrangements will likely require us to relinquish rights to some of our technologies, product candidates or proposed products that we would otherwise seek to develop and commercialize ourselves. If sufficient capital is not available, we may be required to delay, reduce the scope of, or eliminate one or more of our programs. Any of these results could have a material adverse effect on our business.

If we cannot continue to obtain grant funding from government entities or private research foundations or research, drug rescue and development funding from pharmaceutical or biotechnology companies, or if we fail to replace these sources of funding, our ability to continue operations will be harmed.

Historically we have funded a substantial portion of our operating expenses from U.S. government and private grant funding and funding from pharmaceutical companies with which we have collaborative relationships. In order to fund a substantial portion of future operations, particularly future operations related to our proposed drug rescue activities and development of AV-101, we will need to apply for and receive additional grant funding from governments and

governmental organizations such as NIH, the NIH's National Institute of Neurological Disease and Stroke and the California Institute for Regenerative Medicine, however, we may not secure any additional funding from any governmental organization or private research foundation or otherwise. We cannot assure you that we will continue to receive grant funding. If grant funds are no longer available or the funds no longer meet our needs, some of our current and future operations may be delayed or terminated. In addition, our business, financial condition and results of operations will be adversely affected if we are unable to obtain grants or replace these sources of funding.

Our independent auditors have expressed substantial doubt about our ability to continue as a going concern.

Our consolidated financial statements for the year ended March 31, 2012 included in Item 8 of this Report on Form 10-K, have been prepared assuming that we will continue to operate as a going concern. The report of our independent registered public accounting firm on our consolidated financial statements includes an explanatory paragraph discussing conditions that raise a substantial doubt about our ability to continue as a going concern.

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Risks Related to Identification, Access, and Development of Our Drug Rescue Variants

We have never developed a drug rescue variant and cannot be certain that we will be able to do so in the future. Our prospective customers, the pharmaceutical companies of the world, may not perceive value in our efforts or otherwise may choose not to collaborate with us.

Our ability to develop a drug rescue variant is highly dependent upon the accuracy and efficiency of our Human Clinical Trials in a Test TubeTM platform, particularly our CardioSafe 3D™ bioassay system. We have no operating history with respect to the development of drug rescue variants and cannot be certain we will be able to develop drug rescue variants in the future. There are a number of factors that may impact our ability to develop a drug rescue variant, including:

- Our ability to identify and access the potential for drug rescue of once-promising drug candidates that pharmaceutical companies have discontinued in development due to heart or liver toxicity concerns. If we cannot identify once-promising large market drug candidates that can be rescued in an efficient and cost-effective manner, our business will be adversely affected. And, we may choose to focus our resources on a potential drug rescue candidate the rescue of which ultimately proves to be unsuccessful. If we are unable to identify and access suitable drug candidates for our drug rescue programs, we will not be able to obtain product revenues in future periods, which likely will result in significant harm to our financial position and adversely impact our stock price.

- To the extent we elect to attempt to rescue once-promising but discontinued drug candidates that are not otherwise available for research and development based on information available in the public domain, our ability to negotiate licenses with pharmaceutical companies to drug candidates that the pharmaceutical companies have discontinued in development due to heart or liver toxicity concerns. Because we are screening a range of drug rescue candidates, including compounds with proprietary rights held by third parties, for their potential as drug rescue candidates, the growth of our business may depend, in significant part, on our ability to acquire or in-license these compounds. Pharmaceutical companies might be reluctant to reactivate and out-license rights to us with respect to discontinued drug development programs involving potential drug rescue candidates, especially those programs involving substantial prior investment and loss by the pharmaceutical companies, as well as discontinued programs that have been superseded by current programs regarded by the pharmaceutical companies as more advanced than the programs they discontinued. The licensing and acquisition of proprietary compounds, even compounds that have failed in development, is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire compounds that we may consider attractive as drug rescue candidates. These established companies have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to license rights to us. We have no experience in negotiating these licenses and there can be no assurances that we will be able to obtain licenses to discontinued drug rescue candidates on commercially reasonable terms, if at all. If we are unable to obtain licenses to drug candidates we seek to rescue, our business may be adversely affected.

- Our medicinal chemistry collaborators' ability to design and produce drug rescue variants that are structurally related to the drug candidate that was discontinued in development due

to heart or liver toxicity. If our medicinal chemistry collaborator is unsuccessful for any reason in designing and producing drug rescue variants, our business will be adversely affected.

- Our ability to execute our drug rescue programs in a timely and cost-effective manner. If our drug rescue programs are less efficient and more expensive than we expect, our business will be adversely affected.

- Our ability to rescue (develop drug rescue variants) and license our drug rescue variants to pharmaceutical companies. The time necessary to rescue any individual pharmaceutical product is long and can be uncertain. Only a small number of research and development programs ultimately result in commercially successful drugs. We cannot assure you that toxicity results indicated by our drug rescue testing models are indicative of results that would be achieved in future animal studies, in in vitro testing or in human clinical studies, all or some of which will be required in order to obtain regulatory approval of our drug rescue variants.

Our internal validation study of CardioSafe 3D TM has not been subject to peer review or third party validation.

Our internal validation study, conducted to validate the ability of our CardioSafe 3DTM bioassay system to predict the cardiac effects of prospective drug rescue candidates referred to under “Business – Application of Stem Cell Technology to Drug Rescue – CardioSafe 3D TM”, has not been subject to peer review or third party validation. It is possible that the results we obtained from our internal validation study may not be able to be replicated by third parties. If we elect to license drug rescue candidates from pharmaceutical companies rather than accessing information available in the public domain, and such pharmaceutical companies cannot replicate our results, it will be difficult to negotiate and obtain licenses from such pharmaceutical companies to drug candidates we may seek to rescue. Even if such results can be replicated, pharmaceutical companies may nevertheless conclude that their current drug testing models are better than our novel human heart cell-based testing model, CardioSafe 3DTM, and that it does not merit a license to the drug candidate we seek to rescue. Our business model is predicated on our ability to identify and, if information is not otherwise available in the public domain, obtain licenses from pharmaceutical companies to promising drug rescue candidates. If licenses are required, and if we cannot obtain licenses to suitable drug rescue candidates, our business will be adversely affected.

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We cannot say with certainty that our in vitro toxicological testing systems, including CardioSafe 3DTM, will be more efficient or accurate at predicting the toxicity of new drug candidates and drug rescue variants than the nonclinical testing models currently used by pharmaceutical companies.

The success of our drug rescue model is dependent upon the human cell-based toxicology screening bioassay systems we develop being more accurate, efficient and clinically predictive than current animal and cellular testing models. The accuracy and efficiency of our human cell-based bioassay systems is central to our ability to rescue drugs. If our bioassay systems are less accurate and less efficient than current animal and cellular testing models, our business will be adversely affected.

We have a history of losses and anticipate future losses, and continued losses could impair our ability to sustain operations.

We have incurred operating losses every year since our operations began in July 1998. As of March 31, 2012, our accumulated deficit since inception was approximately $54.8 million. Losses have resulted principally from costs incurred in connection with our research and development activities and from general and administrative costs associated with our operations. We expect to incur additional operating losses and, as our research and development efforts, and drug rescue- and stem cell therapy-related activities continue, we expect our operating losses to increase.

Substantially all of our revenues to date have been from research support payments under collaboration agreements, government and private foundation grants, and revenues from stem cell technology licensing arrangements. Our near-term revenues are highly dependent on our ability to produce drug rescue variants and enter into license agreements with pharmaceutical companies with respect to the development and commercialization of our drug rescue variants. Although we also expect to generate revenue from stem cell technology-based drug discovery, development and rescue collaborations with pharmaceutical companies, as well as strategic predictive toxicology screening collaborations, we can provide no assurance that such collaborations will occur in a timely manner, if at all, or, if they do occur, that we will generate material revenue from them. In the event that we are unable to generate projected revenues related to drug rescue licenses, predictive toxicology screening collaborations, government grants and/or stem cell technology-based drug discovery, development and rescue collaboration, we will need to modify our operating plan to the extent necessary to make up for the revenue shortfall which would harm our business and prospects. We may not be successful in entering into any new strategic collaboration or license agreement that results in material or timely revenues. We do not expect that the revenues generated from these arrangements will be sufficient alone to continue or expand our stem cell research, drug rescue, drug development and stem cell therapy activities and otherwise sustain our operations. In addition, in order to fund a substantial portion of future operations, we will need to secure additional capital.

We also expect to experience negative cash flows for the foreseeable future as we finance our operating losses and capital expenditures. This will result in decreases in our working capital, total assets and stockholders' equity, which may not be offset by future funding. We will need to generate significant revenues to achieve profitability. We may not be able to generate these revenues, and we may never achieve profitability. Our failure to achieve profitability could negatively impact the value of our stock. Even if we do become profitable, we cannot assure you that we would be able to sustain or increase profitability on a quarterly or annual basis.

If we cannot enter into and successfully manage a sufficient number of strategic drug discovery, development and rescue collaborations with pharmaceutical companies, our ability to develop drug rescue candidates for our drug pipeline and to fund our future operations will be harmed.

A future element of our drug rescue business model is to enter into strategic stem cell technology-based drug discovery, development and rescue collaborations with established pharmaceutical companies to finance or otherwise

assist in the rescue, development, marketing and manufacture of drugs developed utilizing our stem cell-based bioassay systems for screening heart toxicity, liver toxicity and drug metabolism. Our goal in such collaborations will be to derive a recurring stream of revenues from research and development payments, license fees, milestone payments and royalties. Our prospects, therefore, will depend in large part upon our ability to attract and retain collaborators and to generate customized cellular bioassays and/or rescue drug candidates that meet the requirements of our prospective collaborators. In addition, our collaborators will generally have the right to abandon research projects and terminate applicable agreements, including funding obligations, prior to or upon the expiration of the agreed-upon research terms. There can be no assurance that we will be successful in establishing multiple future collaborations on acceptable terms or at all, that current or future collaborations will not terminate funding before completion of projects, that our existing or future collaborative arrangements will result in successful product commercialization or that we will derive any revenues from such arrangements. To the extent that we are unable to maintain existing or establish new strategic collaborations with pharmaceutical companies, it would require substantial additional capital for us to undertake research, development and commercialization activities on our own.

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In varying degrees for each of the drug candidates we may seek to rescue and develop, we expect to rely on our pharmaceutical company collaborators to develop, conduct Investigational New Drug-enabling and human clinical trials on, obtain regulatory approvals for, manufacture, market and/or commercialize drug rescue variants we license to such collaborators. Such collaborators' diligence and dedication of resources in conducting these activities will depend on, among other things, their own competitive, marketing and strategic considerations, including the relative advantages of competitive products. The failure of our collaborators to conduct their collaborative activities relating to our drug rescue variants successfully and diligently would have a material adverse effect on us.

Some of our competitors or pharmaceutical companies may develop technologies that are superior to or more cost-effective than ours, which may impact the commercial viability of our technologies and which may significantly damage our ability to sustain operations.

The pharmaceutical and biotechnology industries are intensely competitive. Other pluripotent stem cell biology-based bioassay systems and drug candidates that could compete directly with the bioassay technologies and product candidates that we seek to discover, develop and commercialize currently exist or are being developed by pharmaceutical and biotechnology companies and by academic and other research organizations.

Many of the pharmaceutical and biotechnology companies developing and marketing these competing products and technologies have significantly greater financial resources and expertise than we do in research and development, manufacturing, preclinical and clinical testing, obtaining regulatory approvals and marketing and distribution. Pharmaceuticals companies with whom we seek to collaborate may develop their own competing internal programs.

Small companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. Academic institutions, government agencies and other public and private research organizations are conducting research, seeking patent protection and establishing collaborative arrangements for research, clinical development and marketing of products similar to ours. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel, obtaining collaborators and licensees, as well as in acquiring technologies complementary to our programs.

In addition to the above factors, we expect to face competition in the areas of evaluation of product efficacy and safety, the timing and scope of regulatory consents, availability of resources, reimbursement coverage, price and patent position, including potentially dominant patent positions of others.

As a result of the foregoing, our competitors may develop more effective or more affordable products, or achieve earlier patent protection or product commercialization than we do. Most significantly, competitive products may render any technologies and product candidates that we develop obsolete, which would negatively impact our business and ability to sustain operations.

Restrictions on the use of Embryonic Stem Cells ("ES Cells"), political commentary and the ethical and social implications of research involving ES Cells could prevent us from developing or gaining acceptance for commercially viable products based upon such stem cells and adversely affect the market price of our Common Stock.

Some of our most important programs involve the use of ES Cells. Some believe the use of ES Cells gives rise to ethical and social issues regarding the appropriate use of these cells. Our research related to ES Cells may become the subject of adverse commentary or publicity, which could significantly harm the market price of our Common Stock.

Although substantially less than in years past, certain political and religious groups in the United States voice opposition to ES Cell technology and practices. All procedures we use to obtain clinical samples and the procedures we use to isolate ES Cells are consistent with the informed consent and ethical guidelines promulgated by the U.S.

National Academy of Science, the International Society of Stem Cell Research ("ISSCR"), and the NIH. These procedures and documentation have been reviewed by an external Stem Cell Research Oversight Committee, and all cell lines we use have been approved under these guidelines. We use stem cells derived from human embryos that have been created for use in in vitro fertilization ("IVF") procedures but that have been donated with appropriate informed consent for research use after a successful IVF procedure because they are no longer desired or suitable for IVF. Many research institutions, including some of our scientific collaborators, have adopted policies regarding the ethical use of human embryonic tissue. These policies may have the effect of limiting the scope of research conducted using ES Cells, thereby impairing our ability to conduct research in this field.

The U.S. government and its agencies on July 7, 2009 published guidelines for the ethical derivation of human ES Cells required for receiving federal funding for ES Cell research. All of the ES Cell lines we use meet these guidelines for NIH funding. In the U.S., the President's Council on Bioethics monitors stem cell research, and may make recommendations from time to time that could place restrictions on the scope of research using human embryonic or fetal tissue. Although numerous states in the U.S. are considering, or have in place, legislation relating to stem cell research, including California whose voters approved Proposition 71 to provide up to $3 billion of state funding for stem cell research in California, it is not yet clear what affect, if any, state actions may have on our ability to commercialize stem cell technologies. The use of embryonic or fetal tissue in research (including the derivation of ES Cells) in other countries is regulated by the government, and varies widely from country to country. These regulations may affect our ability to commercialize ES Cell-based bioassay systems.

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Government-imposed restrictions with respect to use of ES Cells in research and development could have a material adverse effect on us by harming our ability to establish critical collaborations, delaying or preventing progress in our research and development, and causing a decrease in the market interest in our stock. These ethical concerns do not apply to iPS Cells because their derivation does not involve the use of embryonic tissues.

We have assumed that the biological capabilities of Induced Pluripotent Stem Cells ("iPS Cells") and ES Cells for in vitro bioassay systems are likely to be comparable. If it is discovered that this assumption is incorrect, our ability to develop our Human Clinical Trials in a Test TubeTM platform could be harmed.

We use both ES Cells and iPS Cells as the basis for the continuing development of our Human Clinical Trials in a Test TubeTM platform. With respect to iPS Cells, scientists are still unsure about the clinical utility, life span, and safety of such cells, and whether such cells differ in any clinically significant ways from ES Cells. If we discover that iPS Cells will not be useful for whatever reason for our Human Clinical Trials in a Test TubeTM platform, we could be limited to using only ES Cells. This could negatively affect our ability to develop our Human Clinical Trials in a Test TubeTM platform, particularly in circumstances where it would be preferable to produce iPS Cells to reflect the effects of desired specific genetic variations.

Risks Related to the Regulation of Biological Products

Some of our products, including our or our prospective collaborators' potential cell therapy products, may be subject to biological product regulations. During their clinical development, biological products are regulated pursuant to Investigational New Drug ("IND") requirements. Product development and approval takes a number of years, involves the expenditure of substantial resources and is uncertain. Many biological products that appear promising ultimately do not reach the market because they cannot meet FDA or other regulatory requirements. In addition, there can be no assurance that the current regulatory framework will not change through regulatory, legislative or judicial actions or that additional regulation will not arise during our product development that may affect approval, delay the submission or review of an application, if required, or require additional expenditures by us.

The activities required before a new biological product may be approved for marketing in the U.S. primarily begin with preclinical testing, which includes laboratory evaluation and animal studies to assess the potential safety and efficacy of the product as formulated. Results of preclinical studies are summarized in an IND application to the FDA. Human clinical trials may begin 30 days following submission of an IND application, unless the FDA requires additional time to review the application or raise questions.

Clinical testing involves the administration of the drug or biological product to healthy human volunteers or to patients under the supervision of a qualified principal investigator, usually a physician, pursuant to an FDA-reviewed protocol. Each clinical study is conducted under the auspices of an institutional review board ("IRB") at each of the institutions at which the study will be conducted. A clinical plan, or "protocol," accompanied by the approval of an IRB, must be submitted to the FDA as part of the IND application prior to commencement of each clinical trial. Human clinical trials are conducted typically in three sequential phases. Phase I trials consist of, primarily, testing the product's safety in a small number of patients or healthy volunteers. In Phase II, the safety and efficacy of the product candidate is evaluated in a specific patient population. Phase III trials typically involve additional testing for safety and clinical efficacy in an expanded patient population at geographically dispersed sites. The FDA may order the temporary or permanent discontinuance of a preclinical or clinical trial at any time for a variety of reasons, particularly if safety concerns exist.

A company seeking FDA approval to market a biological product must file a Biologics License Application ("BLA"). In addition to reports of the preclinical and human clinical trials conducted under the IND application, the BLA includes evidence of the product's safety, purity, potency and efficacy, as well as manufacturing, product identification and

other information. Submission of a BLA does not assure FDA approval for marketing. The application review process generally takes one to three years to complete, although reviews of drugs and biological products for life-threatening diseases may be accelerated or expedited. However, the process may take substantially longer.

The FDA requires at least one and often two properly conducted, adequate and well-controlled clinical studies demonstrating efficacy with sufficient levels of statistical assurance. However, additional information may be required. Notwithstanding the submission of such data, the FDA ultimately may decide that the BLA does not satisfy the regulatory criteria for approval and not approve the application. The FDA may impose post-approval obligations, such as additional clinical tests following BLA approval to confirm safety and efficacy (Phase IV human clinical trials). The FDA may, in some circumstances, also impose restrictions on the use of the biological product that may be difficult and expensive to administer. Further, the FDA requires reporting of certain safety and other information that becomes known to a manufacturer of an approved biological product. Product approvals may be withdrawn if compliance with regulatory requirements is not maintained or if problems occur after the product reaches the market.

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Prior to approving an application, the FDA will inspect the prospective manufacturer to ensure that the manufacturer conforms to the FDA's current good manufacturing practice ("cGMP") regulations that apply to biologics. To comply with the cGMP regulations, manufacturers must expend time, money and effort in product recordkeeping and quality control to assure that the product meets applicable specifications and other requirements. The FDA periodically inspects manufacturing facilities in the U.S. and abroad in order to assure compliance with applicable cGMP requirements. Our failure to comply with the FDA's cGMP regulations or other FDA regulatory requirements could have a significant adverse effect on us.

After a product is approved for a given indication in a BLA, subsequent new indications or dosage levels for the same product are reviewed by the FDA via the filing and approval of a BLA supplement. The BLA supplement is more focused than the BLA and deals primarily with safety and effectiveness data related to the new indication or dosage. Applicants are required to comply with certain post-approval obligations, such as compliance with cGMPs.

Risks Related to Our Intellectual Property

If we fail to meet our obligations under license agreements, we may lose our rights to key technologies on which our business depends.

Our business depends on several critical technologies that are based in part on patents licensed from third parties. Those third-party license agreements impose obligations on us, such as payment obligations and obligations to diligently pursue development of commercial products under the licensed patents. If a licensor believes that we have failed to meet our obligations under a license agreement, the licensor could seek to limit or terminate our license rights, which could lead to costly and time-consuming litigation and, potentially, a loss of the licensed rights. During the period of any such litigation our ability to carry out the development and commercialization of potential products could be significantly and negatively affected. If our license rights were restricted or ultimately lost, our ability to continue our business based on the affected technology would be severely adversely affected.

If we elect to rescue drug candidates under license arrangements with pharmaceutical companies or other third parties, it is uncertain what ownership rights, if any, we will obtain over intellectual property we derive from such licenses to lead drug rescue variants we develop.

If, instead of identifying drug rescue candidates based on information available in the public domain, we elect to negotiate and obtain licenses from pharmaceutical companies to drug rescue candidates that these companies have discontinued in development because of heart or liver toxicity, there can be no assurances that we will obtain ownership rights over intellectual property we derive from our licenses to the drug rescue candidates or rights to drug rescue variants we develop as safe and effective alternatives to original drug rescue candidates. If we are unable to obtain ownership rights over intellectual property related to drug rescue variants or economic rights relating to the successful development and commercialization of such drug rescue variants, our business will be adversely affected.

If we are not able to obtain and enforce patent protection or other commercial protection for AV-101 or our pluripotent stem cell technologies, the value of AV-101 and our stem cell technologies and product candidates will be harmed.

Commercial protection of AV-101 and our proprietary pluripotent stem cell technologies is critically important to our business. Our success will depend in large part on our ability to obtain and enforce our patents and maintain trade secrets, both in the U.S. and in other countries.

Additional patents may not be granted, and our existing U.S. and foreign patents might not provide us with commercial benefit or might be infringed upon, invalidated or circumvented by others. In addition, the availability of

patents in foreign markets, and the nature of any protection against competition that may be afforded by those patents, is often difficult to predict and vary significantly from country to country. We, our licensors, or our licensees may choose not to seek, or may be unable to obtain, patent protection in a country that could potentially be an important market for AV-101 and our stem cell technologies.

The patent positions of pharmaceutical and biopharmaceutical companies, including ours, are highly uncertain and involve complex legal and technical questions. In particular, legal principles for biotechnology patents in the U.S. and in other countries are evolving, and the extent to which we will be able to obtain patent coverage to protect our technology, or enforce issued patents, is uncertain.

For example, the European Patent Convention prohibits the granting of European patents for inventions that concern "uses of human embryos for industrial or commercial purposes". The European Patent Office is presently interpreting this prohibition broadly, and is applying it to reject patent claims that pertain to human embryonic stem cells. However, this broad interpretation is being challenged through the European Patent Office appeals system. As a result, we do not yet know whether or to what extent we will be able to obtain European patent protection for our proprietary ES Cell-based technology and systems.

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Publication of discoveries in scientific or patent literature tends to lag behind actual discoveries by at least several months and sometimes several years. Therefore, the persons or entities that we or our licensors name as inventors in our patents and patent applications may not have been the first to invent the inventions disclosed in the patent applications or patents, or the first to file patent applications for these inventions. As a result, we may not be able to obtain patents for discoveries that we otherwise would consider patentable and that we consider to be extremely significant to our future success.

Where several parties seek U.S. patent protection for the same technology, the U.S. Patent and Trademark Office ("U.S. PTO") may declare an interference proceeding in order to ascertain the party to which the patent should be issued. Patent interferences are typically complex, highly contested legal proceedings, subject to appeal. They are usually expensive and prolonged, and can cause significant delay in the issuance of patents. Moreover, parties that receive an adverse decision in interference can lose patent rights. Our pending patent applications, or our issued patents, may be drawn into interference proceedings, which may delay or prevent the issuance of patents or result in the loss of issued patent rights. If more groups become engaged in scientific research related to ES Cells, the number of patent filings by such groups and therefore the risk of our patents or applications being drawn into interference proceedings may increase. The interference process can also be used to challenge a patent that has been issued to another party.

Outside of the U.S., certain jurisdictions, such as Europe, Japan, New Zealand and Australia, permit oppositions to be filed against the granting of patents. Because our intent is to commercialize our products internationally, securing both proprietary protection and freedom to operate outside of the U.S. is important to our business.

Patent opposition proceedings are not currently available in the U.S. patent system, but legislation is pending to introduce them. However, issued U.S. patents can be re-examined by the U.S. PTO at the request of a third party. Patents owned or licensed by us may therefore be subject to re-examination. As in any legal proceeding, the outcome of patent re-examinations is uncertain, and a decision adverse to our interests could result in the loss of valuable patent rights.

Successful challenges to our patents through interference, opposition or re-examination proceedings could result in a loss of patent rights in the relevant jurisdiction(s). As more groups become engaged in scientific research and product development areas of hES Cells, the risk of our patents being challenged through patent interferences, oppositions, re-examinations or other means will likely increase. If we institute such proceedings against the patents of other parties and we are unsuccessful, we may be subject to litigation, or otherwise prevented from commercializing potential products in the relevant jurisdiction, or may be required to obtain licenses to those patents or develop or obtain alternative technologies, any of which could harm our business.

Furthermore, if such challenges to our patent rights are not resolved promptly in our favor, our existing business relationships may be jeopardized and we could be delayed or prevented from entering into new collaborations or from commercializing certain products, which could materially harm our business.

The confidentiality agreements that are designed to protect our trade secrets could be breached, and we might not have adequate remedies for the breach. Additionally, our trade secrets and proprietary know-how might otherwise become known or be independently discovered by others, all of which could materially harm our business.

We may have to engage in costly litigation to enforce or protect our proprietary technology, particularly our pluripotent stem cell technology and bioassay systems, or to defend challenges to our proprietary technology by our competitors, which may harm our business, results of operations, financial condition and cash flow.

Litigation may be necessary to protect our proprietary rights, especially our rights to our pluripotent stem cell technology and bioassay systems. Such litigation is expensive and would divert material resources and the time and attention of our management. We cannot be certain that we will have the required resources to pursue litigation or otherwise to protect our proprietary rights. In the event that we are unsuccessful in obtaining and enforcing patents, our business would be negatively impacted. Further, our patents may be challenged, invalidated or circumvented, and our patent rights may not provide proprietary protection or competitive advantages to us.

Patent litigation may also be necessary to enforce patents issued or licensed to us or to determine the scope and validity of our proprietary rights or the proprietary rights of others. We may not be successful in any patent litigation. An adverse outcome in a patent litigation, patent opposition, patent interference, or any other proceeding in a court or patent office could subject our business to significant liabilities to other parties, require disputed rights to be licensed from other parties or require us to cease using the disputed technology, any of which could severely harm our business.

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We may be subject to litigation that will be costly to defend or pursue and uncertain in its outcome.

Our business may bring us into conflict with our licensees, licensors, or others with whom we have contractual or other business relationships, or with our competitors or others whose interests differ from ours. If we are unable to resolve such conflicts on terms that are satisfactory to all parties, we may become involved in litigation brought by or against us. Any such litigation is likely to be expensive and may require a significant amount of management's time and attention, at the expense of other aspects of our business. The outcome of litigation is always uncertain, and in some cases could include judgments against us that require us to pay damages, enjoin us from certain activities, or otherwise affect our legal or contractual rights, which could have a significant adverse effect on our business.

Much of the information and know-how that is critical to our business is not patentable and we may not be able to prevent others from obtaining this information and establishing competitive enterprises.

We rely, in significant part, on trade secrets to protect our proprietary technologies, especially in circumstances that we believe patent protection is not appropriate or available. We attempt to protect our proprietary technologies in part by confidentiality agreements with our employees, consultants, collaborators and contractors. We cannot assure you that these agreements will not be breached, that we would have adequate remedies for any breach, or that our trade secrets will not otherwise become known or be independently discovered by competitors, any of which would harm our business significantly.

We may be subject to infringement claims that are costly to defend, and which may limit our ability to use disputed technologies and prevents us from pursuing research and development or commercialization of potential products.

Our commercial success depends significantly on our ability to operate without infringing patents and the proprietary rights of others. Our technologies may infringe on the patents or proprietary rights of others. In addition, we may become aware of discoveries and technology controlled by third parties that are advantageous to our programs. In the event our technologies infringe the rights of others or we require the use of discoveries and technologies controlled by third parties, we may be prevented from pursuing research, development or commercialization of potential products or may be required to obtain licenses to those patents or other proprietary rights or develop or obtain alternative technologies. We have obtained licenses from several universities and companies for technologies that we anticipate incorporating into our Human Clinical Trials in a Test TubeTM platform, and are in negotiation for licenses to other technologies. We may not be able to obtain a license to patented technology on commercially favorable terms, or at all. If we do not obtain a necessary license, we may need to redesign our technologies or obtain rights to alternate technologies, the research and adoption of which could cause delays in product development. In cases where we are unable to license necessary technologies, we could be prevented from developing certain potential products. Our failure to obtain alternative technologies or a license to any technology that we may require to research, develop or commercialize our product candidates would significantly and negatively affect our business.

Risks Related to Development, Clinical Testing and Regulatory Approval of Drug Candidates

We have limited experience as a corporation conducting clinical trials, or in other areas required for the successful commercialization and marketing of drug candidates.

We will need to receive regulatory approval for any product candidate before it may be marketed and distributed. Such approval will require, among other things, completing carefully controlled and well-designed clinical trials demonstrating the safety and efficacy of each product candidate. This process is lengthy, expensive and uncertain. As a company, we have limited experience in conducting clinical trials. Such trials will require additional financial and management resources, collaborators with the requisite clinical experience or reliance on third party clinical investigators, contract research organizations and consultants. Relying on third parties may force us to encounter

delays that are outside of our control, which could materially harm our business.

We also do not currently have marketing and distribution capabilities for product candidates. Developing an internal sales and distribution capability would be an expensive and time-consuming process. We may enter into agreements with collaborators or third parties that would be responsible for marketing and distribution. However, these collaborators or third parties may not be capable of successfully selling any of our product candidates.

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Because we and our collaborators must complete lengthy and complex development and regulatory approval processes required to market drug products in the U.S. and other countries, we cannot predict whether or when we or our collaborators will be permitted to commercialize our drug or biologic candidates or drug or biologic candidates to which we have commercial rights.

Federal, state and local governments in the U.S. and governments in other countries have significant regulations in place that govern many of our activities and may prevent us from creating commercially viable products derived from our drug rescue and cell therapy programs.

The regulatory process, particularly for drug and biologic candidates, is uncertain, can take many years and requires the expenditure of substantial resources. Any drug or biologic candidate that we or our collaborators develop must receive all relevant regulatory agency approvals before it may be marketed in the U.S. or other countries. Biological drugs and non-biological drugs are rigorously regulated. In particular, human pharmaceutical therapeutic product candidates are subject to rigorous preclinical and clinical testing and other requirements by the FDA in the U.S. and similar health authorities in other countries in order to demonstrate safety and efficacy. Because any drug and biologic candidates we develop are expected to involve the application of new technologies or are based upon new therapeutic approaches, they may be subject to substantial additional review by various government regulatory authorities, and, as a result, the process of obtaining regulatory approvals for them may proceed more slowly than for drug or biologic candidates based upon more conventional technologies. We may never obtain regulatory approval to market our drug or biologic candidates.

Data obtained from preclinical and clinical activities is susceptible to varying interpretations that could delay, limit or prevent regulatory agency approvals. In addition, delays or rejections may be encountered as a result of changes in regulatory agency policy during the period of product development and/or the period of review of any application for regulatory agency approval for a drug or biologic candidate. Delays in obtaining regulatory agency approvals could significantly harm the marketing of any product that we or our collaborators develop, impose costly procedures upon our activities or the activities of our collaborators, diminish any competitive advantages that we or our collaborators may attain, or adversely affect our ability to receive royalties and generate revenues and profits.

If we obtain regulatory agency approval for a new drug or biologic product, this approval may entail limitations on the indicated uses for which it can be marketed that could limit the potential commercial use of the product. Additionally, approved products and their manufacturers are subject to continual review, and discovery of previously unknown problems with a product or its manufacturer may result in restrictions on the product or manufacturer, including withdrawal of the product from the market. The sale by us or our collaborators of any commercially viable product will be subject to government regulation from several standpoints, including the processes of manufacturing, advertising and promoting, selling and marketing, labeling and distribution. Failure to comply with regulatory requirements can result in severe civil and criminal penalties, including but not limited to product recall or seizure, injunction against product manufacture, distribution, sales and marketing and criminal prosecution. The imposition of any of these penalties could significantly impair our business, financial condition and results of operations.

Entry into clinical trials with one or more drug or biologic candidates may not result in any commercially viable products.

We may never generate revenues from product sales because of a variety of risks inherent in our business, including the following risks:

- clinical trials may not demonstrate the safety and efficacy of our drug rescue variants or stem cell therapies;

- completion of clinical trials may be delayed, or costs of clinical trials may exceed anticipated amounts;
- we may not be able to obtain regulatory approval of our drug rescue variants or biologics, or may experience delays in obtaining such approval;
- we may not be able to manufacture our drug rescue variants economically on a commercial scale;
- we and any licensees of ours may not be able to successfully market our drug rescue variants;
- physicians may not prescribe our products, or patients or third party payors may not accept our drug rescue variants or stem cell therapies;
- others may have proprietary rights which prevent us from marketing our drug rescue variants or stem cell therapies; and
- competitors may sell similar, superior or lower-cost products.

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To be successful, our drug rescue variants and stem cell therapies must be accepted by the healthcare community, which can be very slow to adopt or unreceptive to new technologies and products.

Our drug rescue variants and stem cell therapies, if approved for marketing, may not achieve market acceptance because hospitals, physicians, patients or the medical community in general may decide not to accept and utilize these products. The drug rescue variants and stem cell therapies that we are attempting to develop may represent substantial departures from established treatment methods and will compete with a number of conventional drugs and therapies manufactured and marketed by major pharmaceutical companies. The degree of market acceptance of any of our product candidates will depend on a number of factors, including:

- our establishment and demonstration to the medical community of the clinical efficacy and safety of our drug rescue variants and stem cell therapies;
- our ability to create product candidates that are superior to alternatives currently on the market;
- our ability to establish in the medical community the potential advantage of our treatments over alternative treatment methods; and
- reimbursement policies of government and third-party payors.

If the healthcare community does not accept our developed drug rescue variants or stem cell therapies for any of the foregoing reasons, or for any other reason, our business would be materially harmed.

Risks Related to Our Dependence on Third Parties

Our reliance on the activities of our non-employee advisors, consultants, research institutions and scientific contractors, whose activities are not wholly within our control, may lead to delays in development of our product candidates.

We rely upon and have relationships with scientific consultants at academic and other institutions, some of whom conduct research at our request, and other advisors, including former pharmaceutical company executives, contractors and consultants with expertise in drug discovery, drug development, medicinal chemistry, regulatory strategy, corporate development or other matters. These parties are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. We have limited control over the activities of our advisors, consultants and contractors and, except as otherwise required by our collaboration and consulting agreements, can expect only limited amounts of their time to be dedicated to our activities.

In addition, we have formed, and anticipate forming additional, sponsored research collaborations with academic and other research institutions throughout the world. We are highly dependent on these sponsored research collaborations for the development of our intellectual property. These research facilities may have commitments to other commercial and non-commercial entities. There can also be no assurances that any intellectual property will be created from our sponsored research collaborations and, even if it is created, that the intellectual property will have any value or application to our business. We have limited control over the operations of these laboratories and can expect only limited amounts of their time to be dedicated to our research goals.

If any third party with whom we have or enter into a relationship is unable or refuses to contribute to projects on which we need their help, our ability to advance our technologies and develop our product candidates could be significantly harmed.

Our drug rescue business model involves reliance on collaborations with other companies.

Our business model contemplates making arrangements with third parties:

- to identify and access failed drug candidates to rescue and develop;
- to license drug rescue variants that we develop; and
- to perform stem cell research and development and supply services, such as medicinal chemistry, that is our key to our future success.

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Our strategy is to develop our strategic "drug rescue ecosystem" by entering into arrangements with corporate and academic collaborators, licensors, licensees and others for the research, development and clinical testing. There can be no assurance, however, that we will be able to maintain our current collaborations or establish additional collaborations on favorable terms, if at all, or that our current or future collaborative arrangements will be successful.

Should any collaborator fail to develop or commercialize successfully any drug or biologic candidate to which it has rights, or any of the collaborator's drug or biologic candidate to which we may have rights, our business may be adversely affected. In addition, while we believe that collaborators will have sufficient economic motivation to continue their funding, there can be no assurance that any of these collaborations will be continued or result in successfully commercialized product candidates. Failure of a collaborator to continue funding any particular program, or our inability to provide our collaborator with required funding, could delay or halt the development or commercialization of any technology or product candidates arising out of such programs. In addition, there can be no assurance that the collaborators will not pursue alternative technologies, change strategy, re-allocate resources, terminate our agreement, develop alternative product candidates either on their own or in collaboration with others, including our competitors.

If a conflict of interest arises between us and one or more of our collaborators, they may act in their own self-interest and not in our interest or in the interest of our shareholders. Some of our collaborators are conducting, and any of our future collaborators may conduct, multiple product candidate development efforts within the disease area that is the subject of collaboration with us.

Given these risks, our current and future collaborative efforts with third parties may not be successful. Failure of these efforts could require us to devote additional internal resources to the activities currently performed, or to be performed, by third parties, to seek alternative third-party collaborators, or to delay product candidate development or commercialization, which could have a material adverse effect on our business, financial conditions or results of operations.

Risks Related to Our Operations

We depend on key scientific and management personnel and collaborators for the implementation of our business plan, the loss of whom would slow our ability to conduct research and develop and impair our ability to compete.

Our future success depends to a significant extent on the skills, experience and efforts of our executive officers and key employees on our scientific staff. Competition for personnel, especially scientific personnel, is intense and we may be unable to retain our current personnel, attract or assimilate other highly qualified management and scientific personnel in the future. The loss of any or all of these individuals would result in a significant loss in the knowledge and experience that we, as an organization, possess and could harm our business and might significantly delay or prevent the achievement of research, development or business objectives. Our management and key employees can terminate their employment with us at any time.

We also rely on consultants, advisors and strategic collaborators, especially our strategic collaboration with Dr. Gordon Keller, who assists us in formulating our stem cell research and development strategies. We face intense competition for qualified individuals from numerous pharmaceutical, biopharmaceutical and biotechnology companies, as well as academic and other research institutions. We may not be able to attract and retain these individuals on acceptable terms. Failure to do so could materially harm our business.

Although the current term of our sponsored research collaboration agreement with UHN and our co-founder, Dr. Gordon Keller, does not expire until September 2017, there can be no assurances that we will be able to renew or extend the agreement beyond 2017 on mutually agreeable terms. Additionally, there can be no assurances that we will

receive any invention notices or secure a license to any intellectual property resulting from such sponsored research.

We will need to hire additional highly specialized, skilled personnel to achieve our business plan. Our inability to hire qualified personnel in a timely manner will harm our business.

Our ability to execute on our business plan will largely depend on the talents and efforts of highly skilled individuals with specialized training in the field of stem cell research and drug candidate screening. Our future success depends on our ability to identify, hire and retain these highly skilled personnel during our early stages of development. Competition in our industry for qualified employees with the specialized training we require is intense. In addition, our compensation arrangements may not always be successful in attracting the new employees we require. Our ability to execute our drug rescue business model effectively depends on our ability to attract these new employees.

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Our activities involve hazardous materials, and improper handling of these materials by our employees or agents could expose us to significant legal and financial penalties.

Our research and development activities involve the controlled use of hazardous materials, chemicals and various radioactive compounds. As a consequence, we are subject to numerous environmental and safety laws and regulations, including those governing laboratory procedures exposure to blood-borne pathogens and the handling of bio-hazardous materials. We may be required to incur significant costs to comply with current or future environmental laws and regulations and may be adversely affected by the cost of compliance with these laws and regulations.

Although we believe that our safety procedures for using, handling, storing and disposing of hazardous materials comply with the standards prescribed by state and federal regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. In the event of such an accident, state or federal authorities could curtail our use of these materials and we could be liable for any civil damages that result, the cost of which could be substantial. Further, any failure by us to control the use, disposal, removal or storage, or to adequately restrict the discharge, or assist in the cleanup, of hazardous chemicals or hazardous, infectious or toxic substances could subject us to significant liabilities, including joint and several liability under certain statutes. Any such liability could exceed our resources and could have a material adverse effect on our business, financial condition and results of operations. Additionally, an accident could damage our research and manufacturing facilities and operations.

Additional federal, state and local laws and regulations affecting us may be adopted in the future. We may incur substantial costs to comply with these laws and regulations and substantial fines or penalties if we violate any of these laws or regulations.

We may not be able to obtain or maintain sufficient insurance on commercially reasonable terms or with adequate coverage against potential liabilities in order to protect ourselves against product liability claims.

Our business exposes us to potential product liability risks that are inherent in the testing, manufacturing and marketing of human therapeutic products and testing technologies. We may become subject to product liability claims if the use of our potential products is alleged to have injured subjects or patients. This risk exists for product candidates tested in human clinical trials as well as potential products that are sold commercially. In addition, product liability insurance is becoming increasingly expensive. As a result, we may not be able to obtain or maintain product liability insurance in the future on acceptable terms or with adequate coverage against potential liabilities that could have a material adverse effect on our business.

Our business is subject to the risks of earthquakes, fire, floods and other natural catastrophic events, and to interruption by man-made problems such as computer viruses or terrorism.

Our corporate headquarters are located in the San Francisco Bay Area, a region known for seismic activity. A significant natural disaster, such as an earthquake, fire or a flood, could harm our business. In addition, our servers are vulnerable to computer viruses, break-ins and similar disruptions from unauthorized tampering with our computer systems. In addition, acts of terrorism or war could cause disruptions in our business or the economy as a whole.

We may select and develop product candidates that fail.

We may select for development and expend considerable resources including time and money on product candidates that fail to complete trials, obtain regulatory approval or achieve sufficient sales, if any, to be profitable.

Additional Risks

Our principal institutional stockholders and our President and Chief Scientific Officer own a significant percentage of our stock and will be able to exercise significant influence.

Our co-founder, President and Chief Scientific Officer, Dr. Ralph Snodgrass, and our principal institutional stockholders and their affiliates own a significant percentage of our outstanding capital stock. Accordingly, these stockholders may be able to determine the composition of a majority of our Board of Directors, retain the voting power to approve certain matters requiring stockholder approval, and continue to have significant influence over our affairs. This concentration of ownership could have the effect of delaying or preventing a change in our control. See Item 12, “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters,” for further information about the ownership of our capital stock by our executive officers, directors, and principal shareholders.

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When we require future capital, we may not be able to secure additional funding in order to expand our operations and develop new products.

We expect to seek additional funds from public and private stock offerings, issuance of promissory notes or debentures, borrowings under lease lines of credit, or other sources. This additional financing may not be available on a timely basis on terms acceptable to us, or at all. Additional financing may be dilutive to stockholders or may require us to grant a lender a security interest in our assets. The amount of money we will need will depend on many factors, including:

- revenues generated, if any;
- development expenses incurred;
- the commercial success of our drug rescue and other research and development efforts; and
- the emergence of competing scientific and technological developments.

If adequate funds are not available, we may have to delay or reduce the scope of our drug rescue and development of our product candidates and technologies or license to third parties the rights to commercialize products or technologies that we would otherwise seek to commercialize ourselves. We may also have to reduce collaboration efforts, including sponsored research collaborations. Any of these results would materially harm our business, financial condition and results of operations.

The market price of our common stock has been volatile and may fluctuate significantly in response to many factors, some of which are beyond our control and may be unrelated to our performance.

We anticipate that the market price of our common stock, will fluctuate significantly in response to many factors, some of which are unpredictable, beyond our control and are unrelated to our performance, including specific factors such as the announcement of new products or product enhancements by us or our competitors, developments concerning intellectual property rights and regulatory approvals, quarterly variations in our and our competitors' results of operations, changes in earnings estimates or recommendations by any securities analysts, developments in our industry, strategic actions by us or our competitors, such as acquisitions or restructurings, new laws or regulations or new interpretations of existing laws or regulations applicable to our business, the public's reaction to our press releases, our other public announcements and our filings with the SEC, changes in accounting standards, policies, guidance, interpretations or principles, our inability to raise additional capital as needed, substantial sales of common stock underlying warrants or preferred stock, sales of common stock or other securities by us or our management team, and general market conditions and other factors, including factors unrelated to our own operating performance or the condition or prospects of the biotechnology industry.

Further, the stock market in general, and securities of micro-cap and small-cap companies in particular, frequently experience extreme price and volume fluctuations. Continued broad market fluctuations could result in extreme volatility in the price of our common stock, which could cause a decline in the value of our common stock. You should also be aware that price volatility is likely to be worse if the trading volume of our common stock is low.

There may not ever be an active market for our common stock.

Although our common stock is quoted on the OTC Bulletin Board, our public float is very limited and trading of our common stock may be extremely sporadic. For example, several days may pass before any shares are traded. There can be no assurance that an active market for our common stock will develop. Accordingly, investors must bear the

economic risk of an investment in our common stock for an indefinite period of time.

Because we became a public company by means of a strategic reverse merger, we may not be able to attract the attention of investors or major brokerage firms.

Because we became a public company by means of a strategic reverse merger transaction in May 2011 rather than through a traditional initial public offering involving an investment banking or brokerage firm, securities analysts or major brokerage firms may not provide coverage of us because there may be limited incentive to recommend the purchase of our common stock.

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Because we became a public company as a result of a reverse merger with a public shell, unknown liabilities may adversely affect our financial condition.

We became a public company by means of a strategic reverse merger with a public shell. While management conducted extensive due diligence prior to consummating our strategic reverse merger, in the event the public shell contained undisclosed liabilities, and management was unable to address or otherwise offset such liabilities, such liabilities may materially, and adversely affect our financial condition. As a result of the risks associated with unknown liabilities, potential investors may be unsure or unwilling to invest in the Company.

We will incur significant costs to ensure compliance with corporate governance, federal securities law and accounting requirements.

Since becoming a public company by means of a strategic reverse merger, we are subject to the periodic reporting and other requirements of the federal securities laws, rules and regulations. We have incurred and will incur significant costs to comply with such requirements, including accounting and related auditing costs, and costs to comply with corporate governance and other costs of operating a public company. The filing and internal control reporting requirements imposed by federal securities laws, rules and regulations are rigorous and we may not be able to meet them, resulting in a possible decline in the price of our common stock and our inability to obtain future financing. Any failure to comply or adequately comply with federal securities laws, rules or regulations could subject us to fines or regulatory actions, which may materially adversely affect our business, results of operations and financial condition.

Our compliance with the Sarbanes-Oxley Act and SEC rules concerning internal controls may be time consuming, difficult and costly.

Our management team has limited experience as officers of a publicly-traded company, and prior to May 2011, we did not operate as a publicly-traded company. It may be time consuming, difficult and costly for us to implement and maintain the internal controls and reporting procedures required by Sarbanes-Oxley. If we are unable to comply with Sarbanes-Oxley's internal controls and disclosure requirements, we may not be able to obtain the independent registered public accounting firm attestations that Sarbanes-Oxley Act requires certain publicly-traded companies to obtain. If it is determined that we have a material weakness in our internal control over financial reporting, we could incur additional costs and suffer adverse publicity and other consequences of any such determination.

We cannot assure you that our common stock will be liquid or that our common stock will be listed on the New York Stock Exchange, the Nasdaq Stock Market, or other similar exchanges.

We do not yet meet the initial listing standards of the New York Stock Exchange, the Nasdaq Stock Market, or other similar exchanges. Until our common stock is listed on an exchange, we anticipate that it will remain quoted on the OTC Bulletin Board, another over-the-counter quotation system, or in the "pink sheets." In those venues, however, investors may find it difficult to obtain accurate quotations as to the market value of our common stock. In addition, if we failed to meet the criteria set forth in SEC regulations, various requirements would be imposed by law on broker-dealers who sell our securities to persons other than established customers and accredited investors. Consequently, such regulations may deter broker-dealers from recommending or selling our common stock, which may further affect their liquidity. This would also make it more difficult to raise additional capital.

There may be additional issuances of shares of preferred stock in the future.

Following approval by our stockholders in October 2011, our Articles of Incorporation now permit us to issue up to 10.0 million shares of preferred stock and our Board has authorized the issuance of up to 500,000 shares of Series A

Convertible Preferred Stock, of which 437,055 shares are outstanding at March 31, 2012. Our Board of Directors could authorize the issuance of additional series of preferred stock in the future and such preferred stock could grant holders preferred rights to our assets upon liquidation, the right to receive dividends before dividends would be declared to holders of our common stock, and the right to the redemption of such shares, possibly together with a premium, prior to the redemption of the common stock. In the event and to the extent that we do issue additional preferred stock in the future, the rights of holders of our common stock could be impaired thereby, including without limitation, with respect to liquidation.

Our common stock may be considered a “penny stock.”

Since we became a publicly-traded corporation in May 2011, our common stock has traded on the OTC Bulletin Board at a price of less than $5.00 per share. The Securities and Exchange Commission (“SEC”) has adopted regulations which generally define a “penny stock” as an equity security that has a market price of less than $5.00 per share, subject to specific exemptions. To the extent that the market price of our common stock is less than $5.00 per share and, therefore, may be considered a “penny stock,” brokers and dealers effecting transactions in our common stock must disclose certain information concerning the transaction, obtain a written agreement from the purchaser and determine that the purchaser is reasonably suitable to purchase the securities. These rules may restrict the ability of brokers or dealers to sell our common stock and may affect your ability to sell shares of our common stock. In addition, as long as our common stock remains listed on the OTC Bulletin Board, investors may find it difficult to obtain accurate quotations of the stock, and may find few buyers to purchase such stock and few market makers to support its price.

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We do not intend to pay cash dividends on our common stock in the foreseeable future.

We have never declared or paid any dividends on our shares of common stock and we do not currently anticipate paying any such dividends in the foreseeable future. Any payment of cash dividends will depend upon our financial condition, contractual restrictions, financing agreement covenants, solvency tests imposed by corporate law, results of operations, anticipated cash requirements and other factors and will be at the discretion of our Board of Directors. Furthermore, we may incur indebtedness that may severely restrict or prohibit the payment of dividends.

We may be at risk of securities class action litigation that could result in substantial costs and divert management's attention and resources.

In the past, securities class action litigation has been brought against a company following periods of volatility in the market place of its securities, particularly following the company's initial public offering. Due to the potential volatility of our stock price, we may be the target of securities litigation in the future. Securities litigation could result in substantial costs and divert management's attention and resources.

Item 1B. Unresolved Staff Comments

The disclosures in this section are not required since we qualify as a smaller reporting company.

Item 2. Properties

Our headquarters are located at 384 Oyster Point Boulevard, No. 8, South San Francisco, California 94080-1967, where we occupy approximately 6,900 square feet of office and lab space under a lease expiring on June 30, 2013. We believe our current facilities are suitable and adequate for our current needs.

Item 3. Legal Proceedings

From time to time, we may become involved in claims and other legal matters arising in the ordinary course of business. We are not presently involved in any legal proceedings nor do we know of any legal proceedings which are threatened or contemplated.

Item 4. Mine Safety Disclosures

Not applicable.

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PART II

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

Market Information

On June 21, 2011 our common stock began trading on the OTC Bulletin Board under the symbol "VSTA." There was no established trading market for our common stock prior to that date. On May 23, 2011 our directors approved a 2-for-1 forward stock split. The stock split became effective on the OTC Bulletin Board on June 21, 2011.

Shown below is the range of high and low closing prices for our common stock for the periods indicated as reported by the OTC Bulletin Board. The market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commissions and may not necessarily represent actual transactions.

	High	Low
Year Ending March 31, 2012		
First quarter ending June 30, 2011 (from June 21, 2011)	$2.60	$2.45
Second quarter ending September 30, 2011	$2.60	$1.80
Third quarter ending December 31, 2011	$3.10	$2.57
Fourth quarter ending March 31, 2012	$3.15	$2.55

On June 28, 2012 the closing price of our common stock on the OTC Bulletin Board was $0.98 per share.

As of June 28, 2012, we had 17,559,963 shares of common stock outstanding and 263 common stockholders of record. On the same date, one stockholder held all 437,055 outstanding shares of our Series A Preferred Stock.

Dividend Policy

We have not paid any dividends in the past and we do not anticipate that we will pay dividends in the foreseeable future.

Issuer Purchase of Equity Securities

There were no repurchases of our common stock during the quarter ended March 31, 2012

Securities Authorized for Issuance Under Equity Compensation Plans

Equity Grants

As of March 31, 2012, options to purchase a total of 4,805,771 shares of common stock are outstanding at a weighted average exercise price of $1.53 per share, of which 3,740,135 options are vested and exercisable at a weighted average exercise price of $1.45 per share and 1,065,636 are unvested and unexercisable at a weighted average exercise price of $1.83 per share. These options were issued under our 2008 Plan and our 1999 Plan, each as more particularly described below. An additional 433,700 shares remain available for future equity grants under our 2008 Plan.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans

	(a)		(b)	(excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	4,266,300	$	1.57	433,700
Equity compensation plans not approved by security holders	539,471		1.23	--
Total	4,805,771	$	1.53	433,700

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2008 Stock Incentive Plan

We adopted our 2008 Plan on December 19, 2008. The maximum number of shares of our common stock that may be granted pursuant to the 2008 Plan is currently 5,000,000. In all cases, the maximum number of shares of common stock under the 2008 Plan will be subject to adjustments for stock splits, stock dividends or other similar changes in our common stock or our capital structure. Notwithstanding the foregoing, the maximum number of shares of common stock available for grant of options intended to qualify as "incentive stock options" under the provisions of Section 422 of the Internal Revenue Code of 1986 (the "Code"), is 5,000,000.

Our 2008 Plan provides for the grant of stock options, restricted shares of common stock, stock appreciation rights and dividend equivalent rights, collectively referred to as "awards". Stock options granted under the 2008 Plan may be either incentive stock options under the provisions of Section 422 of the Code, or non-qualified stock options. We may grant incentive stock options only to employees of VistaGen or any parent or subsidiary of VistaGen. Awards other than incentive stock options may be granted to employees, directors and consultants.

Our Board of Directors or the Compensation Committee of the Board of Directors, referred to as the "Administrator", administers our 2008 Plan, including selecting the award recipients, determining the number of shares to be subject to each award, determining the exercise or purchase price of each award and determining the vesting and exercise periods of each award.

The exercise price of all incentive stock options granted under our 2008 Plan must be at least equal to 100% of the fair market value of the shares on the date of grant. If, however, incentive stock options are granted to an employee who owns stock possessing more than 10% of the voting power of all classes of our stock or the stock of any parent or subsidiary of us, the exercise price of any incentive stock option granted must not be less than 110% of the fair market value on the grant date. The maximum term of these incentive stock options granted to employees who own stock possessing more than 10% of the voting power of all classes of our stock or the stock of any parent or subsidiary of us must not exceed five years. The maximum term of an incentive stock option granted to any other participant must not exceed ten years. The Administrator will determine the term and exercise or purchase price of all other awards granted under our 2008 Plan.

Under the 2008 Plan, incentive stock options may not be sold, pledged, assigned, hypothecated, transferred or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the participant, only by the participant. Other awards shall be transferable:

- by will and by the laws of descent and distribution; and
- during the lifetime of the participant, to the extent and in the manner authorized by the Administrator by gift or pursuant to a domestic relations order to members of the participant's immediate family.

The 2008 Plan permits the designation of beneficiaries by holders of awards, including incentive stock options.

In the event of termination of a participant's service for any reason other than disability or death, such participant may, but only during the period specified in the award agreement of not less than 30 days commencing on the date of termination (but in no event later than the expiration date of the term of such award as set forth in the award agreement), exercise the portion of the participant's award that was vested at the date of such termination or such other portion of the participant's award as may be determined by the Administrator. The participant's award agreement may provide that upon the termination of the participant's service for cause, the participant's right to exercise the award shall terminate concurrently with the termination of the participant's service. In the event of a participant's change of status from employee to consultant, an employee's incentive stock option shall convert automatically into a non-qualified

stock option on the day three months and one day following such change in status. To the extent that the participant's award was unvested at the date of termination, or if the participant does not exercise the vested portion of the participant's award within the period specified in the award agreement of not less than 30 days commencing on the date of termination, the award shall terminate. If termination was caused by death or disability, any options which have become exercisable prior to the time of termination, will remain exercisable for twelve months from the date of termination (unless a shorter or longer period of time is determined by the Administrator).

Following the date that the exemption from application of Section 162(m) of the Code ceases to apply to awards, the maximum number of shares with respect to which options and stock appreciation rights may be granted to any participant in any calendar year will be 2,500,000 shares of common stock. In connection with a participant's commencement of service with us, a participant may be granted options and stock appreciation rights for up to an additional 500,000 shares that will not count against the foregoing limitation. In addition, following the date that the exemption from application of Section 162(m) of the Code ceases to apply to awards, for awards of restricted stock and restricted shares of common stock that are intended to be "performance-based compensation" (within the meaning of Section 162(m)), the maximum number of shares with respect to which such awards may be granted to any participant in any calendar year will be 2,500,000 shares of common stock. The limits described in this paragraph are subject to adjustment in the event of any change in our capital structure as described below.

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The terms and conditions of awards shall be determined by the Administrator, including the vesting schedule and any forfeiture provisions. Awards under the plan may vest upon the passage of time or upon the attainment of certain performance criteria. The performance criteria established by the Administrator may be based on any one of, or combination of, the following:

- increase in share price;
- earnings per share;
- total shareholder return;
- operating margin;
- gross margin;
- return on equity;
- return on assets;
- return on investment;
- operating income;
- net operating income;
- pre-tax profit;
- cash flow;
- revenue;
- expenses;
- earnings before interest, taxes and depreciation;
- economic value added; and
- market share.

Subject to any required action by our shareholders, the number of shares of common stock covered by outstanding awards, the number of shares of common stock that have been authorized for issuance under the 2008 Plan, the exercise or purchase price of each outstanding award, the maximum number of shares of common stock that may be granted subject to awards to any participant in a calendar year, and the like, shall be proportionally adjusted by the Administrator in the event of any increase or decrease in the number of issued shares of common stock resulting from certain changes in our capital structure as described in the 2008 Plan.

Effective upon the consummation of a Corporate Transaction (as defined below), all outstanding awards under the 2008 Plan will terminate unless the acquirer assumes or replaces such awards. The Administrator has the authority, exercisable either in advance of any actual or anticipated Corporate Transaction or Change in Control (as defined

below) or at the time of an actual Corporate Transaction or Change in Control and exercisable at the time of the grant of an award under the 2008 Plan or any time while an award remains outstanding, to provide for the full or partial automatic vesting and exercisability of one or more outstanding unvested awards under the 2008 Plan and the release from restrictions on transfer and repurchase or forfeiture rights of such awards in connection with a Corporate Transaction or Change in Control, on such terms and conditions as the Administrator may specify. The Administrator also shall have the authority to condition any such award vesting and exercisability or release from such limitations upon the subsequent termination of the service of the grantee within a specified period following the effective date of the Corporate Transaction or Change in Control. The Administrator may provide that any awards so vested or released from such limitations in connection with a Change in Control, shall remain fully exercisable until the expiration or sooner termination of the award.

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Under our 2008 Plan, a Corporate Transaction is generally defined as:

- an acquisition of securities possessing more than fifty percent (50%) of the total combined voting power of our outstanding securities but excluding any such transaction or series of related transactions that the Administrator determines shall not be a Corporate Transaction;

- a reverse merger in which we remain the surviving entity but: (i) the shares of common stock outstanding immediately prior to such merger are converted or exchanged by virtue of the merger into other property, whether in the form of securities, cash or otherwise; or (ii) in which securities possessing more than fifty percent (50%) of the total combined voting power of our outstanding securities are transferred to a person or persons different from those who held such securities immediately prior to such merger;

- a sale, transfer or other disposition of all or substantially all of the assets of our Corporation;

- a merger or consolidation in which our Corporation is not the surviving entity; or

- a complete liquidation or dissolution.

Under our 2008 Plan, a Change in Control is generally defined as: (i) the acquisition of more than 50% of the total combined voting power of our stock by any individual or entity which a majority of our Board of Directors (who have served on our board for at least 12 months) do not recommend our shareholders accept; (ii) or a change in the composition of our Board of Directors over a period of 12 months or less.

Unless terminated sooner, our 2008 Plan will automatically terminate in 2017. Our Board of Directors may at any time amend, suspend or terminate our 2008 Plan. To the extent necessary to comply with applicable provisions of U.S. federal securities laws, state corporate and securities laws, the Internal Revenue Code, the rules of any applicable stock exchange or national market system, and the rules of any non-U.S. jurisdiction applicable to awards granted to residents therein, we shall obtain shareholder approval of any such amendment to the 2008 Stock Plan in such a manner and to such a degree as required.

As of March 31, 2012, we have options to purchase an aggregate of 4,266,300 shares of common stock outstanding under our 2008 Plan.

1999 Stock Incentive Plan

VistaGen's Board of Directors adopted our 1999 Plan on December 6, 1999. The 1999 Plan has terminated under its own terms, and as a result, no awards may currently be granted under the 1999 Plan. However, the options and awards that have already been granted pursuant to the 1999 Plan remain operative.

The 1999 Plan permitted VistaGen to make grants of incentive stock options, non-qualified stock options and restricted stock awards. VistaGen initially reserved 450,000 shares of its common stock for the issuance of awards under the 1999 Plan, which number was subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization. Generally, shares that were forfeited or cancelled from awards under the 1999 Plan also were available for future awards.

The 1999 Plan could be administered by either VistaGen's Board of Directors or a committee designated by VistaGen's Board of Directors. VistaGen's Board of Directors designated its Compensation Committee as the committee with full power and authority to select the participants to whom awards were granted, to make any combination of awards to participants, to accelerate the exercisability or vesting of any award and to determine the specific terms and conditions

of each award, subject to the provisions of the 1999 Plan. All directors, executive officers, and certain other key persons (including employees, consultants and advisors) of VistaGen were eligible to participate in the 1999 Plan.

The exercise price of incentive stock options awarded under the 1999 Plan could not be less than the fair market value of the common stock on the date of the option grant and could not be less than 110% of the fair market value of the common stock to persons owning stock representing more than 10% of the voting power of all classes of our stock. The exercise price of non-qualified stock options could not be less than 85% of the fair market value of the common stock. It is expected that the term of each option granted under the 1999 Plan will not exceed ten years (or five years, in the case of an incentive stock option granted to a 10% shareholder) from the date of grant. VistaGen's Compensation Committee determined at what time or times each option may be exercised (provided that in no event may it exceed ten years from the date of grant) and, subject to the provisions of the 1999 Plan, the period of time, if any, after retirement, death, disability or other termination of employment during which options could be exercised.

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Restricted stock could also be granted under our 1999 Plan. Restricted stock awards issued by VistaGen were shares of common stock that vest in accordance with terms and conditions established by VistaGen's Compensation Committee. VistaGen's Compensation Committee could impose conditions to vesting it determined to be appropriate. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture. VistaGen's Compensation Committee determined the number of shares of restricted stock granted to any employee. Our 1999 Plan also gave VistaGen's Compensation Committee discretion to grant stock awards free of any restrictions.

Unless the Compensation Committee provided otherwise, our 1999 Plan did not generally allow for the transfer of incentive stock options and other awards and only the recipient of an award could exercise an award during his or her lifetime. Non-qualified stock options are transferable only to the extent provided in the award agreement, in a manner consistent with the applicable law, and by will and by the laws of descent and distribution. In the event of a change in control of the Company, the outstanding options will automatically vest unless our Board of Directors and the Board of Directors of the surviving or acquiring entity shall make appropriate provisions for the continuation or assumption of any outstanding awards under the 1999 Plan.

As of March 31, 2012, we have options to purchase an aggregate of 539,471 shares of our common stock outstanding under our 1999 Plan.

Recent Sales of Unregistered Securities

During the three years preceding the date of this report, we issued the following securities which were not registered under the Securities Act of 1933 (the "Securities Act"):

12% Convertible Notes and Warrants

On February 28, 2012, we consummated a private placement of convertible promissory notes to certain accredited investors in the aggregate principal amount of $500,000 (the "Notes"). Each Note accrues interest at the rate of 12% per annum to be paid in kind quarterly, and will mature on the earlier to occur of twenty-four months from the date of issuance or consummation of an equity, equity-based or series of equity-based financings resulting in gross proceeds to us of at least $4.0 million (a "Qualified Financing"). The holder of each Note may voluntarily convert the outstanding principal amount of the Notes, together with all accrued and unpaid interest thereon ("Outstanding Balance") into that number of shares of our common stock equal to the Outstanding Balance, divided by $3.00 (the "Conversion Shares"). In addition, in the event we consummate a Qualified Financing, and the price per unit of the securities sold, or share of common stock issuable in connection with such Qualified Financing, is at least $2.00, the Outstanding Balance will automatically convert into such securities, the amount of which shall be determined according to a formula set forth in the Notes. The Notes rank pari-passu with respect to certain other promissory notes that we may issue, in an aggregate principal amount not to exceed $3.0 million, inclusive of the Notes.

The purchaser of each Note was issued a warrant to purchase, for $2.75 per share, that number of shares of our common stock equal to 150% of the total principal amount of the Notes purchased by such purchaser, divided by $2.75, resulting in the potential issuance of an aggregate of 272,724 shares of our common stock upon exercise of the warrants. The warrants terminate, if not exercised, five years from the date of issuance.

Noble Financial Capital Markets served as the lead placement agent for the Company in connection with the Note Offering and received fees totaling $21,000.

The Notes and Warrants were offered and sold in transactions exempt from registration under the Securities Act of 1933, as amended ("Securities Act"), in reliance on Section 4(2) thereof and Rule 506 of Regulation D thereunder. Each of the Purchasers represented that it was an "accredited investor" as defined in Regulation D.

2011 Private Placement

On May 11, 2011, we completed a private placement of 1,108,048 Units at a price of $1.75 per Unit ("2011 Private Placement"). Each Unit consisted of one share of our common stock and a warrant to purchase one fourth (1/4) of one share of our common stock at an exercise price of $2.50 per share.

Fall 2011 Follow-On Offering

Beginning in October 2011, we initiated a follow-on private placement of Units. These Units were essentially the same as the Units issued in connection with the 2011 Private Placement, namely, each Unit was priced at $1.75 and consisted of one share of our common stock and a three-year warrant to purchase one-fourth (1/4) of one share of our common stock at an exercise price of $2.50 per share. We sold a total of 63,570 Units and received aggregate cash proceeds of $111,248.

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Warrant Exercises

During the quarter ended December 31, 2011, warrant holders exercised warrants to purchase an aggregate of 3,121,259 shares of our common stock, including warrants to purchase 1,599,858 shares of common stock exercised by Platinum under the terms of the Note and Warrant Exchange Agreement, as described in Note 9, Capital Stock, to our financial statements included in Item 8 of this Report on Form 10-K. The warrants exercised by Platinum resulted in proceeds of $1,719,823 which was applied to reduce the outstanding balance of the Platinum Note and accrued interest under the terms of the Note and Exchange Agreement.

Other investors and service providers exercised warrants to purchase an aggregate of 1,028,860 shares of our common stock. In connection with these exercises, we received cash proceeds of $1,106,129; satisfied outstanding indebtedness to certain holders in lieu of payment by us totaling an aggregate of $30,128; and prepaid future services to be performed by certain holders in the aggregate amount of $41,343.

Additionally, in December 2011, we entered into an Agreement Regarding Payment of Invoices and Warrant Exercises with Cato Holding Company, doing business as Cato BioVentures (“CHC”), Cato Research Ltd (“CRL”), and certain individual warrant holders affiliated with CHC and CRL (collectively, the “CHC Affiliates”) under the terms of which CHC and the CHC Affiliates exercised warrants to purchase an aggregate of 492,541 shares of our common stock. As a result of these warrant exercises, we received cash payments of $60,207 and, in lieu of cash payments for the exercise of certain warrants, CHC and CRL agreed to the satisfaction of outstanding indebtedness to CRL in the amount of $245,278 and pre-payment for future services in the amount of $226,449.

Common Stock Exchange Agreement with Platinum

On December 22, 2011, we entered into a strategic Common Stock Exchange Agreement (the "Exchange Agreement") with Platinum, pursuant to which Platinum converted 484,000 shares of VistaGen common stock into 45,980 shares of our Series A Preferred Stock (the "Exchange"). Each share of Series A Preferred Stock issued to Platinum is convertible into ten shares of VistaGen common stock. In consideration for the Exchange, the Series A Preferred Stock received by Platinum in connection with the Exchange is convertible into the equivalent of 0.95 shares of common stock surrendered in connection with the Exchange. The Exchange was effected without registration under the Securities Act in reliance upon the exemption from registration provided by Section 3(a)(9) of the Securities Act, and/or Section 4(2) thereunder. We received no proceeds in connection with the Exchange.

Issuance of Excaliber Common Stock in Merger Transaction

On May 11, 2011, Excaliber issued 6,836,452 shares of its common stock to shareholders of VistaGen in connection with the Merger. The issuance of shares of Excaliber’s common stock to these individuals was made in reliance on the exemption provided by Section 4(2) of the Securities Act for the offer and sale of securities not involving a public offering.

Morrison & Foerster Note

On March 15, 2010, we issued an unsecured promissory note in the aggregate principal amount of approximately $1.3 million to our legal counsel, Morrison & Foerster LLP (“Morrison & Foerster”), in exchange for cancellation of accounts payable for accrued legal fees, including legal fees relating to its intellectual property portfolio, totaling approximately $1.3 million (the “Morrison & Foerster Note”). The Morrison & Foerster Note provides that amounts payable for services rendered by Morrison & Foerster to us from March 1, 2010 through the closing of our 2011 private placement shall automatically be added to the outstanding principal balance of the Morrison & Foerster Note upon delivery of an invoice for such services.

On May 5, 2011, we amended and restated the Morrison & Foerster Note to provide for (i) the extension of the maturity date of the note to March 31, 2016 and (ii) an initital payment of $100,000 within three business days of the date of the note (which amount has been paid), followed by the payment of the remaining note balance in monthly installments according to the following five-year schedule: (A) after June 1, 2011, $15,000 per month until March 31, 2012; (B) $25,000 per month from April 1, 2012 to March 31, 2013; (C) $50,000 per month from April 1, 2013 to March 31, 2016; provided, however, that beginning on January 1, 2012, we will be required to make interim cash payments to Morrison & Foerster under the Morrison & Foerster Note equal to five percent (5.0%) of the proceeds of any of our public or private equity financings during the then-remaining term of the note. All amounts paid under the Morrison & Foerster Note shall be fully credited against the outstanding note balance at the time each payment is made. If any amount remains unpaid as of March 31, 2016, such remaining amount shall be paid in full by such date. In connection with the foregoing amendment and restatement of the Morrison & Foerster Note, we issued 200,000 shares of restricted common stock to Morrison & Foerster at a price of $1.75 per share. At March 31, 2012, the aggregate principal and accrued interest of the Morrison & Foerster Note is approximately $2.4 million.

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McCarthy Tetrault Note

On May 5, 2011, we issued an unsecured promissory note in the aggregate principal amount of CDN $502,796.79 to our Canadian legal counsel, McCarthy Tetrault LLP ("McCarthy") in exchange for cancellation of all accounts payable for accrued legal fees (the "McCarthy Note"). The terms of the McCarthy Note provide for: (i) beginning on May 31, 2011, and on or before the last business day of each calendar month thereafter until December 31, 2011, payment of $10,000 per month ("McCarthy Monthly Payment") until the earlier of: (a) the full payment of the McCarthy Note or (b) June 30, 2014; provided, however, that (1) beginning on January 31, 2012, the McCarthy Monthly Payment shall increase to $15,000, (2) upon the closing of a McCarthy Qualified Financing (as defined below), we will be required to pay McCarthy $100,000 within ten (10) business days of the closing of such McCarthy Qualified Financing, (3) beginning on January 1, 2012, we will be required to make interim cash payments to McCarthy under the McCarthy Note equal to one percent (1.0%) of the proceeds of all of our public or private equity financings during the term of the McCarthy Note; and (4) if, during the term of the McCarthy Note, (A) we receive a strategic loan from the federal government of Canada under a low interest long term Canadian federal loan program with net loan proceeds to us of at least CDN $5,000,000 in cash, and (B) the terms of such loan permit the use of loan proceeds by us to pay prior indebtedness to McCarthy, then we shall be required to make an interim cash payment to McCarthy equal to three percent (3%) of such loan proceeds within ten (10) days of our receipt thereof from the Canadian federal government. All amounts paid under the McCarthy Note shall be fully credited against the outstanding note balance at the time each payment is made. If any amount remains unpaid as of June 30, 2014, such remaining amount shall be paid in full by such date. For purposes of the McCarthy Note, "McCarthy Qualified Financing" means an equity or equity based financing or series of equity financings between the issuance date of the McCarthy Note and June 30, 2012, resulting in gross proceeds to us of at least CDN $5,500,000. In connection with the issuance of the McCarthy Note, we issued 100,000 shares of restricted common stock to McCarthy at a price of $1.75 per share.

Desjardins Securities Note

On May 5, 2011, we issued an unsecured promissory note in the principal amount of $236,058 to our former Canadian investment bankers, Desjardins Securities Inc. ("Desjardins"), to reimburse Desjardins, pursuant to our prior investment banking services engagement agreement, for legal fees paid by Desjardins on our behalf in connection with a proposed corporate finance transaction in Canada ("Desjardins Note"). The terms of the Desjardins Note provide for, beginning on May 31, 2011, and on or before the last business day of each calendar month thereafter until December 31, 2011, payment of approximately $4,000 per month ("Desjardins Monthly Payment") until the earlier of: (a) the full payment of the Desjardins Note or (b) June 30, 2014; provided, however, that (1) beginning on January 31, 2012, the Desjardins Monthly Payment shall increase to $6,000, (2) upon the closing of a Desjardins Qualified Financing (as defined below), we will be required to pay Desjardins $39,600 within ten (10) business days of the closing of such Desjardins Qualified Financing, (3) beginning on January 1, 2012, we will be required to make interim cash payments to Desjardins under the Desjardins Note equal to one-half of one percent (0.5%) of the proceeds of all of our public or private equity financings during the term of the Desjardins Note; and (4) if, during the term of the Desjardins Note, (A) we receive a strategic loan from the federal government of Canada under a low interest long-term Canadian federal loan program with net loan proceeds to us of at least CDN $5,000,000 in cash, and (B) the terms of such loan permit the use of loan proceeds by us to pay prior indebtedness to Desjardins, then we shall be required to make an interim cash payment to Desjardins equal to one percent (1%) of such loan proceeds within ten (10) days of our receipt thereof from the Canadian federal government. All amounts paid under the Desjardins Note shall be fully credited against the outstanding note balance at the time each payment is made. If any amount remains unpaid as of June 30, 2014, such remaining amount shall be paid in full by such date. For purposes of the Desjardins Note, "Desjardins Qualified Financing" means an equity or equity based financing or series of equity financings between the issuance date of the Desjardins Note and June 30, 2012, resulting in gross proceeds to us of at least CDN $5,500,000. In connection with the issuance of the Desjardins Note, we issued 39,600 shares of restricted common stock to Desjardins at a price of $1.75 per share.

August 2010 Notes and Warrants

In August 2010, we issued short-term, non-interest bearing, unsecured promissory notes (the "August 2010 Short Term Notes") having an aggregate principal amount, as adjusted, of $1,120,000, for a purchase price of $800,000. In connection with the 2011 Private Placement, a total of $840,000 of the aggregate principal amount of the August 2010 Short Term Notes, plus a note cancellation premium of $94,500, were converted into Units, $105,000 of such amount was converted into a long-term note issued to Cato BioVentures, and $175,000 of such amount was not converted, of which amount approximately $64,000 remains outstanding. In connection with the issuance of the August 2010 Short Term Notes, we issued to each holder thereof a warrant to purchase that number of shares of our common stock determined by multiplying the purchase price of such August 2010 Short Term Note by 0.50. Warrants exercisable to acquire an aggregate of 200,000 shares of our common stock were also issued in connection with the issuance of the August 2010 Short Term Notes. These warrants expire three (3) years from the date of issuance and have an exercise price of $2.00 per share.

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2008/2010 Notes and Warrants

From May 2008 to August 4, 2010, we sold 10% convertible promissory notes in the aggregate principal amount of $2,971,815 (the "2008/2010 Notes"). All of the 2008/2010 Notes converted into Units in connection with the 2011 Private Placement. In connection with the sale and issuance of the 2008/2010 Notes, we issued each holder of a 2008/2010 Note a warrant to purchase that number of shares of common stock equal to the number of shares determined by dividing the principal amount of such holder's 2008/2010 Note by the price per share sold under an equity or equity based financing or series of equity-based financings resulting in gross proceeds totaling at least $3 million and then multiplying the quotient by 0.5. The warrants expire on the earlier of: (i) December 31, 2013; or (ii) 10 days preceding the closing date of the sale of VistaGen or all or substantially all of its assets. The warrants are exercisable at an exercise price equal to $2.625 per share.

Cato BioVentures

Cato BioVentures, the life sciences venture capital affiliate of Cato Research, is one of our largest institutional stockholders. Pursuant to a loan agreement dated as of February 3, 2004 by and between Cato BioVentures and VistaGen, as amended, Cato BioVentures extended to VistaGen a $400,000 revolving line of credit. As of April 29, 2011, the outstanding balance under the line of credit agreement was $242,273. On April 29, 2011, the line of credit agreement was terminated and VistaGen issued to Cato BioVentures an unsecured promissory note in the principal amount of $352,273 (the "2011 Cato Note"), which principal amount included the $242,273 outstanding balance on the line of credit as of April 29, 2011, and $105,000 of indebtedness owed to Cato BioVentures under its August 2010 Short-Term Note (as described above). The 2011 Cato Note bears interest at the rate of 7.0% per annum, is payable in installments as follows: ten thousand dollars ($10,000) each month, beginning June 1, 2011 and ending on November 1, 2011; twelve thousand five hundred dollars ($12,500) each month, beginning December 1, 2011, and each month thereafter until the balance under the 2011 Cato Note is paid in full, with the final monthly payment to be made in the amount equal to the then current outstanding balance of principal and interest due under the 2011 Cato Note.

Item 6. Selected Financial Data

The disclosures in this section are not required since we qualify as a smaller reporting company.

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

Cautionary Note Regarding Forward-Looking Statements

The following discussion contains forward-looking statements that are based on the current beliefs of our management, as well as current assumptions made by, and information currently available to, our management. All statements contained in the discussion below, other than statements that are purely historical, are forward-looking statements. These forward-looking statements are subject to risks and uncertainties that could cause our future actual results, performance or achievements to differ materially from those expressed in, or implied by, any such forward-looking statements as a result of certain factors, including, but not limited to, those risks and uncertainties discussed in this section, as well as in the section entitled "Risk Factors," and elsewhere in our other filings with the SEC. Forward-looking statements are based on estimates and assumptions we make in light of our experience and perception of historical trends, current conditions and expected future developments, as well as other factors that we believe are appropriate and reasonable in the circumstances. See "Cautionary Note Regarding Forward-Looking Statements" elsewhere in this Annual Report on Form 10-K.

Our business is subject to significant risks including, but not limited to, our ability to obtain additional financing, the results of our research and development efforts, the results of pre-clinical and clinical testing, the effect of regulation

by the United States Food and Drug Administration (FDA) and other agencies, the impact of competitive products, product development, commercialization and technological difficulties, the effect of our accounting policies, and other risks as detailed in the section entitled “Risk Factors” and in our other filings with the Securities and Exchange Commission. Further, even if our product candidates appear promising at various stages of development, our share price may decrease such that we are unable to raise additional capital without dilution or other terms that may be unacceptable to our management, Board of Directors and shareholders.

Investors are cautioned not to place undue reliance on the forward-looking statements contained herein. Additionally, unless otherwise stated, the forward-looking statements contained in this report are made as of the date of this report, and we have no intention and undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. The forward-looking statements contained in this report are expressly qualified by this cautionary statement. New factors emerge from time to time, and it is not possible for us to predict which factors may arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause our actual results to differ materially from those contained in any forward-looking statements.

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Business Overview

We are a biotechnology company applying human pluripotent stem cell technology for drug rescue and cell therapy.

Drug rescue involves the combination of human pluripotent stem cell technology with modern medicinal chemistry to generate new chemical variants ("drug rescue variants") of promising small molecule drug candidates that pharmaceutical companies have discontinued during preclinical or early clinical development ("put on the shelf") due to heart or liver toxicity. We anticipate that our stem cell technology platform, Human Clinical Trials in a Test Tubetm, will allow us to assess the heart and liver toxicity profile of new drug candidates with greater speed and precision than nonclinical in vitro techniques and technologies currently used in the drug development process. Our drug rescue model is designed to leverage both the pharmaceutical company's substantial prior investment in discovery and development of once-promising drug candidates which they ultimately put on the shelf and the predictive toxicology and drug development capabilities of our Human Clinical Trials in a Test Tubetm platform.

Our Human Clinical Trials in a Test Tubetm platform is based on a combination of proprietary and exclusively licensed stem cell technologies, including technologies developed over the last 20 years by Canadian scientist, Dr. Gordon Keller, and Dr. Ralph Snodgrass, VistaGen's founder, President and Chief Scientific Officer. Dr. Keller is currently the Director of the University Health Network's McEwen Centre for Regenerative Medicine in Toronto. Dr. Keller's research is focused on understanding and controlling stem cell differentiation (development) and production of multiple types of mature, functional, human cells from pluripotent stem cells, including heart cells and liver cells that can be used in our biological assay systems (drug screening systems) for drug rescue. Dr. Snodgrass has nearly 20 years of experience in both academia and industry in the development and application of stem cell differentiation systems for drug discovery and development.

With mature heart cells produced from stem cells, we have developed CardioSafe 3D ™, a three-dimensional ("3D") bioassay system. We believe CardioSafe 3D ™ is capable of predicting the in vivo cardiac effects, both toxic and non-toxic, of small molecule drug candidates before they are tested in humans. Our immediate goal is to leverage CardioSafe 3D ™ to generate and monetize a pipeline of small molecule drug candidates through drug rescue collaborations. We intend to expand our drug rescue capabilities by developing LiverSafe 3D ™, a human liver cell-based toxicity and metabolism bioassay system.

In parallel with our drug rescue activities, we plan to advance pilot nonclinical development of cell therapy programs focused on blood, cartilage, heart, liver and pancreas cells. Each of these cell therapy programs is based on the proprietary differentiation and production capabilities of our Human Clinical Trials in a Test Tube tm platform.

With grant funding from the U.S. National Institutes of Health ("NIH"), we are also developing AV-101, an orally available small molecule prodrug candidate aimed at the multi-billion dollar neurological disease and disorders market. AV-101 is currently in Phase I development in the U.S. for treatment of neuropathic pain, a serious and chronic condition causing pain after an injury or disease of the peripheral or central nervous system. Neuropathic pain affects approximately 1.8 million people in the U.S. alone. To date, we have been awarded over $8.9 million of grant funding from the NIH for preclinical and Phase I clinical development of AV-101.

Our immediate plan is to utilize the vast amount of information available in the public domain with respect to potential drug rescue candidates. We may also seek to acquire rights to drug rescue candidates that third-parties, including academic research institutions and biotechnology, medicinal chemistry and pharmaceutical companies have put on the shelf due to heart or liver toxicity. In connection with our drug rescue programs, we will collaborate with contract medicinal chemistry and preclinical development service companies to generate a pipeline of proprietary small molecule drug rescue variants which may be as effective and commercially promising as the third-party's original (toxic) drug candidate but without the toxicity that caused it to be put on the shelf. We plan to have economic

participation rights in each drug candidate that we generate in connection with our drug rescue programs.

The Merger

VistaGen was incorporated in California on May 26, 1998 (inception date). Excaliber Enterprises, Ltd. ("Excaliber") was organized as a Nevada corporation on October 6, 2005. On May 11, 2011, Excaliber acquired all outstanding shares of VistaGen for 6,836,452 shares of Excaliber's common stock (the "Merger"), and assumed VistaGen's pre-Merger obligations to contingently issue common shares in accordance with stock option agreements, warrant agreements, and a convertible promissory note. As part of the Merger, Excaliber repurchased 5,064,207 shares of its common stock from two stockholders for a nominal amount, leaving 784,500 shares of Excaliber common stock outstanding at the date of the Merger. The 6,836,452 shares issued to VistaGen stockholders in connection with the Merger represented approximately 90% of the outstanding shares of Excaliber's common stock after the Merger. As a result of the Merger, the business of VistaGen became the business of Excaliber. Shortly after the Merger:

- Each of the prior directors of VistaGen was appointed as a director of Excaliber;
- The prior directors and officers of Excaliber resigned as officers and directors of Excaliber;
- VistaGen's prior officers were appointed as officers of like tenor of Excaliber;
- Excaliber's directors approved a two-for-one (2:1) forward stock split of Excaliber's common stock;
- Excaliber's directors approved an increase in the number of shares of common stock Excaliber was authorized to issue from 200 million to 400 million shares, (see Note 9, Capital Stock, to the Consolidated Financial Statements included in Item 8 of this Form 10-K);
- Excaliber changed its name to "VistaGen Therapeutics, Inc."; and
- Excaliber adopted VistaGen's fiscal year-end of March 31, with VistaGen as the accounting acquirer.

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VistaGen, as the accounting acquirer in the Merger, recorded the Merger as the issuance of stock for the net monetary assets of Excaliber, accompanied by a recapitalization. This accounting for the transaction was identical to that resulting from a reverse acquisition, except that no goodwill or other intangible assets were recorded. A total of 1,569,000 shares of common stock, representing the 784,500 shares held by stockholders of Excaliber immediately prior to the Merger and effected for the post-Merger two-for-one forward stock split mentioned above, have been retroactively reflected as outstanding for the entire fiscal year ended March 31, 2011 and for the period prior to the Merger in the fiscal year ended March 31, 2012 for purposes of determining basic and diluted loss per common share in the Consolidated Statements of Operations included in Item 8 of this Form 10-K. Additionally, the accompanying Consolidated Balance Sheets retroactively reflect the authorized capital stock and $0.001 par value of Excaliber's common stock and the two-for one forward stock split after the Merger.

The financial statements included in this discussion and in the Consolidated Financial Statements included in Item 8 of this Form 10-K represent the activity of VistaGen (the California corporation) for the fiscal year ended March 31, 2011 and the pre-Merger portion of fiscal 2012 and the consolidated activity of VistaGen (the California corporation) and Excaliber from May 11, 2011 (the date of the Merger) through March 31, 2012. The activities and results of operations of Excaliber were not material in the pre-Merger periods presented.

Primary Merger-Related Transactions

Immediately preceding and concurrent with the Merger:

- VistaGen sold 2,216,106 Units, consisting of one share of VistaGen's common stock and a three-year warrant to purchase one-fourth (1/4) of one share of VistaGen common stock at an exercise price of $2.50 per share, at a price of $1.75 per Unit in a private placement for aggregate gross offering proceeds of $3,878,197, including $2,369,194 in cash ("2011 Private Placement"). See Note 9, Capital Stock, to the Consolidated Financial Statements included in Item 8 of this Form 10-K, for a further description;
- Holders of certain promissory notes issued by VistaGen from 2006 through 2010 converted their notes totaling $6,174,793, including principal and accrued but unpaid interest, into 3,528,290 Units at $1.75 per Unit. These Units were the same Units issued in connection with the 2011 Private Placement. See Note 8, Convertible Promissory Notes and Other Notes Payable, to the Consolidated Financial Statements included in Item 8 of this Form 10-K; and
- All holders of VistaGen's then-outstanding preferred stock converted all 2,884,655 of their shares of VistaGen preferred stock into 2,884,655 shares of VistaGen common stock at a price of $1.75 per share. See Note 9, Capital Stock, to the Consolidated Financial Statements included in Item 8 of this Form 10-K.

Financial Operations Overview

Net Loss

We are in the development stage and, since inception, have devoted substantially all of our time and efforts to stem cell research and stem-cell based bioassay system development, small molecule drug development, creating, protecting and patenting intellectual property, recruiting personnel and raising working capital. As of March 31, 2012, we had an accumulated deficit of $54.8 million. Our net loss for the years ended March 31, 2012 and 2011 was $12.2 million and $9.5 million, respectively. We expect these conditions to continue for the foreseeable future as we expand our drug rescue activities and the capabilities of our Human Clinical Trials in a Test Tube™ platform.

The following table summarizes the results of our operations for the fiscal years ended March 31, 2012 and 2011 (amounts in $000):

	Fiscal Years Ended March 31,	
	2012	2011
Revenues:		
Grant revenue	$ 1,342	$ 2,071
Total revenues	1,342	2,071
Operating expenses:		
Research and development	5,389	3,678
General and administrative	4,997	4,958
Total operating expenses	10,386	8,636
Loss from operations	(9,044)	(6,565)
Other expenses, net:		
Interest expense, net	(1,893)	(3,119)
Change in put and note extension option and warrant liabilities	(78)	204
Loss on early extinguishment of debt	(1,193)	-
Loss before income taxes	(12,208)	(9,480)
Income taxes	(2)	(2)
Net loss	$ (12,210)	$ (9,482)

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Revenue

Our primary sources of revenue for the fiscal years ended March 31, 2012 and 2011 were government grant awards from the NIH to pursue the development of AV-101 and from California Institute of Regenerative Medicine ("CIRM") to develop our bioassay system for predictive liver toxicology and drug metabolism drug screening, and from a strategic research contract with third parties. The AV-101 grant from NIH accounted for 87% and 69% of total revenue for fiscal year 2012 and 2011, respectively. The CIRM grant accounted for 6% and 26% of total revenue in fiscal year 2012 and 2011, respectively. The current NIH grant terminates on June 30, 2012 and our CIRM grant terminated in September 2011. Government grant revenue typically reimburses us for expenses incurred in the subject research area plus a nominal allocation or fee to cover our related administrative and infrastructure costs.

Research and Development Expense

Research and development expense represented approximately 52% and 43% of total operating expenses for the years ended March 31, 2012 and 2011, respectively. Research and development costs are expensed as incurred. Research and development expense consists of both internal and external expenses incurred in sponsored stem cell research and development activities, costs associated with the clinical and non-clinical development of AV-101 and costs related to the licensing, application and prosecution of our intellectual property. These expenses primarily consist of the following:

- salaries, benefits, including stock-based compensation costs, travel and related expense for personnel associated with research and development activities;
- fees paid to contract research organizations and other professional service providers for services related to the conduct and analysis of clinical trials and other development activities;
- fees paid to third parties for access to licensed technology and costs associated with securing and maintaining patents related to our internally generated inventions:
- laboratory supplies and materials;
- leasing and depreciation of laboratory equipment; and
- allocated costs of facilities and infrastructure.

General and Administrative Expense

General and administrative expense consists primarily of salaries and related expense, including stock-based compensation expense, for personnel in executive, finance and accounting, and other support functions. Other costs include professional fees for legal, investor relations and accounting services and other strategic consulting and public company expenses as well as facility costs not otherwise included in research and development expense.

During the second half of our fiscal year ended March 31, 2011, we expensed significant legal, accounting and other fees that we had incurred in anticipation of a potential listing on the Toronto Stock Exchange when, for strategic purposes, we refrained from pursuing a listing on that securities exchange due to market conditions.. Following the Merger in May 2011, we increased our administrative headcount and engaged certain consulting services to meet our obligations as a public reporting company.

Other Expenses, Net

We incurred interest expense on the outstanding balance of our convertible promissory notes issued beginning in 2006, substantially all of which were converted into Units in May 2011 at a price of $1.75 per Unit in connection with the Merger. We also incurred interest expense on the Platinum Note prior to its exchange into our Series A Preferred Stock in December 2011, and on various notes issued to certain service providers during the years ended March 31, 2011 and 2012.

We recorded non-cash income in fiscal 2011 and non-cash expense in fiscal 2012 related to the change in the fair values of the derivatives associated with the Platinum Notes. In fiscal 2012, we recorded a non-cash loss on early extinguishment of debt related to the exchange of the Platinum Note into shares of our Series A Preferred Stock under the terms of a note and warrant exchange agreement.

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Critical Accounting Policies and Estimates

We consider certain accounting policies related to revenue recognition, impairment of long-lived assets, research and development, stock-based compensation, and income taxes to be critical accounting policies that require the use of significant judgments and estimates relating to matters that are inherently uncertain and may result in materially different results under different assumptions and conditions. The preparation of financial statements in conformity with United States generally accepted accounting principles ("GAAP") requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes to the consolidated financial statements. These estimates include useful lives for property and equipment and related depreciation calculations, and assumptions for valuing options, warrants and other stock-based compensation. Our actual results could differ from these estimates.

Revenue Recognition

Our revenues consist primarily of revenues from government grant awards and strategic collaborations. We recognize revenue under the provisions of the Securities and Exchange Commission issued Staff Accounting Bulletin 104, Topic 13, Revenue Recognition Revised and Updated ("SAB 104") and Accounting Standards Codification ("ASC") 605-25, Revenue Arrangements-Multiple Element Arrangements ("ASC 605-25"). Revenue for arrangements not having multiple deliverables, as outlined in ASC 605-25, is recognized once costs are incurred and collectability is reasonably assured.

Revenue arrangements with multiple components are divided into separate units of accounting if certain criteria are met, including whether the delivered component has stand-alone value to the customer. Consideration received is allocated among the separate units of accounting based on their respective selling prices. The selling price for each unit is based on vendor-specific objective evidence, or VSOE, if available, third party evidence if VSOE is not available, or estimated selling price if neither VSOE nor third party evidence is available. The applicable revenue recognition criteria are then applied to each of the units.

We recognize revenue when the four basic criteria of revenue recognition are met: (1) a contractual agreement exists; (2) the transfer of technology has been completed or services have been rendered; (3) the fee is fixed or determinable; and (4) collectability is reasonably assured. For each source of revenue, we comply with the above revenue recognition criteria in the following manner:

- Collaborative arrangements typically consist of non-refundable and/or exclusive technology access fees, cost reimbursements for specific research and development spending, and various milestone and future product royalty payments. If the delivered technology does not have stand-alone value, the amount of revenue allocable to the delivered technology is deferred. Non-refundable upfront fees with stand-alone value that are not dependent on future performance under these agreements are recognized as revenue when received, and are deferred if we have continuing performance obligations and have no objective and reliable evidence of the fair value of those obligations. We recognize non-refundable upfront technology access fees under agreements in which we have a continuing performance obligation ratably, on a straight-line basis, over the period in which we are obligated to provide services. Cost reimbursements for research and development spending are recognized when the related costs are incurred and when collectability is reasonably assured. Payments received related to substantive, performance-based "at-risk" milestones are recognized as revenue upon achievement of the milestone event specified in the underlying contracts, which represent the culmination of the earnings process. Amounts received in advance are recorded as deferred revenue until the technology is transferred, costs are incurred, or a milestone is reached.

- Technology license agreements typically consist of non-refundable upfront license fees, annual minimum access fees and/or royalty payments. Non-refundable upfront license fees and annual minimum payments received with

separable stand-alone values are recognized when the technology is transferred or accessed, provided that the technology transferred or accessed is not dependent on the outcome of the continuing research and development efforts. Otherwise, revenue is recognized over the period of our continuing involvement.

- Government grant awards, which support our research efforts on specific projects, generally provide for reimbursement of approved costs as defined in the terms of grant awards. We recognize grant revenue when associated project costs are incurred.

Impairment of Long-Lived Assets

In accordance with ASC 360-10, Property, Plant & Equipment—Overall, we review for impairment whenever events or changes in circumstances indicate that the carrying amount of property and equipment may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, we write down the assets to their estimated fair values and recognize the loss in the statements of operations.

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Research and Development Expenses

Research and development expenses include internal and external costs. Internal costs include salaries and employment related expenses of scientific personnel and direct project costs. External research and development expenses consist of sponsored stem cell research and development costs, costs associated with clinical and non-clinical development of AV-101, our lead drug candidate, and costs related to application and prosecution of patents related to our stem cell technology platform, Human Clinical Trials in a Test Tube™, and AV-101. All such costs are charged to expense as incurred.

Stock-Based Compensation

We account for stock-based payment arrangements in accordance with ASC 718, Compensation-Stock Compensation and ASC 505-50, Equity-Equity Based Payments to Non-Employees which requires the recognition of compensation expense, using a fair-value based method, for all costs related to stock-based payments including stock options and restricted stock awards. We recognize compensation cost for all share-based awards to employees based on their grant date fair value. Share-based compensation expense is recognized over the period during which the employee is required to perform service in exchange for the award, which generally represents the scheduled vesting period. We have no awards with market or performance conditions. For equity awards to non-employees, we re-measure the fair value of the awards as they vest and the resulting value is recognized as an expense during the period over which the services are performed.

We use the Black-Scholes option pricing model to estimate the fair value of stock-based awards as of the grant date. The Black-Scholes model is complex and dependent upon key data input estimates. The primary data inputs with the greatest degree of judgment are the expected terms of the stock options and the estimated volatility of our stock price. The Black-Scholes model is highly sensitive to changes in these two inputs. The expected term of the options represents the period of time that options granted are expected to be outstanding. We use the simplified method to estimate the expected term as an input into the Black-Scholes option pricing model. We determine expected volatility using the historical method, which is based on the historical daily trading data of our common stock over the expected term of the option.

Income Taxes

We account for income taxes using the asset and liability approach for financial reporting purposes. We recognize deferred tax assets and liabilities 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. 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. Valuation allowances are established, when necessary, to reduce the deferred tax assets to an amount expected to be realized.

Recent Accounting Pronouncements

See Note 3 to the consolidated financial statements included in Item 8 in this Annual Report on Form 10-K for information on recent accounting pronouncements.

Results of Operations

Comparison of Years Ended March 31, 2012 and 2011

Revenue

The following table compares the primary revenue sources between the periods (in $000):

	Fiscal Years Ended March 31,	
	2012	2011
NIH - AV-101 grant	$ 1,163	$ 1,432
CIRM grant	79	546
Subcontract revenue	100	93
Total Revenue	$ 1,342	$ 2,071

NIH grant revenue decreased as a result of decreases in our direct labor and third party billable expense reimbursements related to AV-101 grant-funded work as the grant award neared completion in June 2012. Grant revenue from the California Institute of Regenerative Medicine ("CIRM") project decreased as the grant reached completion in September 2011.

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Research and Development Expense

Research and development expense increased by 46% to $5.4 million in fiscal 2012 compared to $3.7 million in fiscal 2011. The following table compares the primary components of research and development expense between the periods (in $000):

	Fiscal Years Ended March 31,	
	2012	2011
Salaries and benefits	$ 862	$ 576
Stock-based compensation	477	475
Consulting	179	-
UHN research under SRCA	830	1,275
Technology licenses and royalties	340	282
Project-related third-party research and supplies:		
AV-101	2,191	819
CIRM	37	87
All other including CardioSafe and LiverSafe	231	30
	2,459	936
Rent	104	99
Depreciation	37	37
Warrant modification expense	101	-
All other	-	(2)
Total Research and Development Expense	$ 5,389	$ 3,678

Salary and benefits expense increased due to the impact of new research stem cell research and development personnel added since December 2010 and a bonus granted in December 2011. Consulting expense reflects the expense related to the grant of warrants to members of our Scientific Advisory Board, including our advisors who are former medicinal chemistry, drug safety and drug development experts from large pharmaceutical companies, as well as to other strategic consultants during the fourth quarter of fiscal 2012. Sponsored stem cell research and development expense associated with the laboratories of Dr. Gordon Keller at UHN reflect our strategic issuance in fiscal 2012 of $330,000 in (non-cash) stock-based compensation to UHN and $500,000 in research consulting expense to UHN to expand the scope and duration of our intellectual property rights under our long term stem cell research collaboration with Dr. Keller and UHN, as well as the execution of exclusive License Agreements for novel stem cell technology discovered and developed by Dr. Keller and his research team at UHN. Fiscal 2011 UHN sponsored research expense associated with Dr. Keller's laboratories includes a non-cash stock-based compensation charge of $1,050,000 plus payments for sponsored stem cell technology research services. Technology licenses and royalty expense for fiscal 2011 reflected a decrease resulting from an adjustment of royalty expense to reflect a provision in one of our arrangements that permits an offset for patent prosecution costs we incur. The increase in AV-101-related project expense reflects increased third-party costs of $1,372,000, including approximately $170,000 in grant–reimbursable costs related to the now-completed Phase 1a clinical study of AV-101 and approximately $300,000 for grant-reimbursable costs of the AV-101 Phase 1b clinical trials that were still in progress at March 31, 2012. An additional component of the AV-101 project increase includes on-going non-grant-reimbursable efforts conducted by third-party collaborators, including Cato Research Ltd., whose efforts included costs of $539,000 for developing new NIH grant applications for subsequent phases of the project as well as for general project management. The CIRM grant expired at the end of September 2011. Other non-grant project expense includes $54,000 attributable to a new stem cell research collaboration in 2011. Warrant modification expense is attributable to the Agreement Regarding Payment of Invoices and Warrant Exercises with Cato Holding Company described in Note 9, Capital Stock, to the

Consolidated Financial Statements included in Item 8 of this Form 10-K. We do not track internal research and development expenses, including compensation costs, by project as we do not currently believe that such project accounting is feasible nor required given the overlap of project resources, including staffing, that are dedicated to our research and development projects.

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General and Administrative Expense

General and administrative expense was essentially unchanged at $5.0 million for the years ended March 31, 2012 and 2011. The following table compares the primary components of general and administrative expense between the periods (in $000):

	Fiscal Years Ended March 31,	
	2012	2011
Salaries and benefits	$ 875	$ 401
Stock-based compensation	1,114	1,154
Consulting services	558	88
Legal, accounting and other professional fees	1,033	3,005
Investor relations	343	16
Insurance	101	16
Travel and entertainment	68	70
Rent and utilities	89	77
Warrant modification expense	641	-
All other expenses	175	131
Total General and Administrative Expense	$ 4,997	$ 4,958

During fiscal 2011, we expensed $2,526,000 million of legal, accounting and other fees that we had incurred pursuing a potential listing on the Toronto Stock Exchange when we decided not to proceed with that initiative as a result of declining market conditions for initial public offerings. Excluding the impact of that transaction, legal, accounting and professional fees have increased by approximately $550,000 in fiscal 2012, primarily as a result of (i) costs related to the Merger and becoming an SEC reporting public company in May 2011 and to maintaining our status as such and (ii) warrant and stock grants to legal and other strategic consultants aggregating $393,000 during fiscal 2012. The increase in salaries and benefits expense in fiscal 2012 reflects the impact of headcount increases, reduced officer compensation levels in fiscal 2011 and payments aggregating $85,000 representing partial recovery of that reduction paid in May 2011, as well as $321,000 of compensation attributed to two officers related to the May 2011 the cancellation of certain notes receivable from the officers, as described in Note 14, Related Party Transactions, to the Consolidated Financial Statements included in Item 8 of this Form 10-K. During fiscal 2012, we also incurred increased consulting and other outside service costs related to expanded business development, investor relations and awareness initiatives. Consulting expense includes $299,000 representing the fair value of warrants granted to members of our Board of Directors and other strategic consultants during the fourth quarter of fiscal 2012, in addition to fees for business development and other consulting and strategic services. Non-cash expense related to stock-based compensation for fiscal 2012 includes the expense impact of options granted prior to fiscal 2011 and in fiscal year 2012 to employees and consultants as well as the impact of our increased stock price on the expense related to unvested non-employee option grants. We granted no options during fiscal 2011. Additionally, in fiscal year 2012, we incurred non-cash warrant modification expense of $641,000 related to reducing the exercise price and, in some cases, extending the term of certain outstanding warrants to purchase our common stock, as described in Note 9, Capital Stock, to the Consolidated Financial Statements included in Item 8 of this Form 10-K.

Other Expense, Net

Other expense, net for the fiscal year ended March 31, 2012 consists of the $1,193,500 loss on early debt extinguishment related to the December 2011 exchange of the Platinum Note and warrants for Series A Preferred Stock, as described in Note 8, Convertible Promissory Notes and Other Notes Payable, to the Consolidated Financial

Statements included in Item 8 of this Form 10-K, interest expense of $1,893,000, and a $78,000 net charge for the increase in the fair value of the Platinum Notes extension option and warrant liability, both of which were terminated in conjunction with the May 2011 Merger and restructuring of the Platinum Notes. Other expense for the fiscal year ended March 31, 2011 consisted of $3,119,000 of interest expense offset by a $204,000 benefit for the decrease in the fair value of the then-outstanding Platinum Notes extension option and warrant liability. The decrease in interest expense between the periods resulted primarily from the conversion of convertible promissory notes into equity in connection with the Merger in May 2011 and the exchange of the Platinum Note for equity in December 2011.

Liquidity and Capital Resources

At March 31, 2012, we had cash and cash equivalents of $81,000 and our current liabilities exceeded our current assets by $2.9 million. During May and June 2012, warrant holders exercised warrants to purchase an aggregate of 539,554 shares of our common stock and we received cash proceeds and satisfaction of amounts due for services in lieu of our payments in the aggregate amount of $269,800. On June 29, 2012, we entered into an agreement pursuant to which we will issue two secured three-year 10% convertible promissory notes in the aggregate principal amount of $500,000 to Platinum during July 2012. See Note 16, Subsequent Events, to the Consolidated Financial Statements included in Item 8 of this Form 10-K for additional information regarding the additional financing we have received since March 31, 2012.

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Since inception in May 1998, VistaGen has financed its operations, technology development and technology acquisitions primarily through the issuance and sale of equity and equity-linked securities for cash consideration and convertible promissory notes and short-term promissory notes, as well as from government research grant awards and strategic collaboration payments.

On May 11, 2011, immediately prior to the Merger, we sold 2,216,106 Units in the 2011 Private Placement at a price of $1.75 per Unit. The Units consisted of one share of common stock and one warrant entitling the holder to purchase one-fourth (1/4) of one share of common stock at an exercise price of $2.50 per share. The warrants, which collectively allow for the purchase of 554,013 shares of common stock, expire on May 11, 2014. Proceeds from the sale of the Units were $2,369,194 in cash, a $500,000 note due on September 6, 2011, cancellation of $840,000 of our short-term notes payable due on April 30, 2011, a note cancellation premium of $94,500, and cancellation of $74,503 of accounts payable. At September 30, 2011, the $500,000 promissory note due on September 6, 2011 remained unpaid. In October 2011, we restructured the note receivable to require a series of monthly payments to us through September 2012 (see Note 9, Capital Stock, to the accompanying Consolidated Financial Statements in Item 8 of this Form 10-K)

At the time of the Merger, (i) outstanding convertible promissory notes in the amount of $6,174,793, including principal and accrued interest; and (ii) all 2,884,655 of our then-outstanding shares of preferred stock were converted into shares of common stock at a price of $1.75 per share. The holders of the notes that converted and all holders of the preferred stock exchanged their securities for an aggregate of 6,412,945 shares of our common stock, which shares were part of the 6,836,452 shares of Excaliber’s common stock issued for the outstanding shares of VistaGen's common stock in connection with the Merger.

Subsequent to the Merger and through March 31, 2012, we have cancelled the $4.0 million principal balance of the previously outstanding convertible note payable to Platinum, as well as warrants to purchase 1,599,858 shares of our common stock held by Platinum in exchange for the issuance to Platinum of 437,055 shares of our Series A preferred stock. Additionally, we have modified the exercise price and, in some cases, the term of outstanding warrants and other warrant holders have exercised warrants to purchase 1,521,401 shares of our common stock. As a result of these exercises, we have received cash proceeds of $1,166,000, satisfied outstanding liabilities for services aggregating approximately $275,000 in lieu of payment in cash, and arranged equity-based satisfaction for future services of approximately $268,000 in lieu of cash payment, most of which services had been received by March 31, 2012. We also sold 63,570 Units, each Unit consisting of one share of our common stock and a three-year warrant to purchase one-fourth (¼) of one share of our common stock, in a follow-on private placement and received cash proceeds of approximately $111,000. Additionally, in February 2012, we issued 12% convertible promissory notes in the aggregate principal amount of $500,000 and received cash proceeds of $466,500 after expenses of the offering. The notes mature in February 2014. In connection with the notes, we also issued to the purchasers of the notes five-year warrants to purchase an aggregate of 272,724 shares of our common stock at $2.75 per share. Since March 31, 2012, we have received cash proceeds and satisfaction of amounts due for services in lieu of our payments in the aggregate amount of $269,800 as a result of the exercise of previously-outstanding warrants. In June 2012, we entered into an agreement pursuant to which we will issue two secured three-year 10% convertible promissory notes in the aggregate principal amount of $500,000 to Platinum during July 2012.

We do not believe that our current cash and cash equivalents, including the cash proceeds from warrant exercises and the issuance of the convertible promissory note described above and in Note 16, Subsequent Events, to the Consolidated Financial Statements included in Item 8 of this Form 10-K, will enable us to fund our operations through the next twelve months. We anticipate that our cash expenditures during the next twelve months will be between approximately $4 million and $6 million. We have demonstrated the ability to manage our costs aggressively and increase our operating efficiencies while advancing our stem cell technology platform and AV-101 development programs. To further advance drug rescue applications of our stem cell technology platform, pilot nonclinical cell

therapy initiatives, and clinical development of AV-101, as well as support our operating activities, we expect our monthly operating costs associated with salaries and benefits, regulatory and public company consulting, contract research and development, legal, accounting and other working capital costs to increase. In the past, we have relied primarily on government grant awards, private placements of our debt and equity securities, and strategic collaborations to meet our operating budget and achieve our business objectives, and we plan to continue that practice in the future. The general economic conditions during fiscal 2011 and 2012, including the tightening of available funding for micro-cap and small-cap biotechnology companies in the financial markets, delayed the extent of advancement on our stem cell technology-based drug rescue programs and clinical development programs. Although we have been successful over the past fourteen years with raising sufficient capital to fund our operations, and we will continue to pursue additional financing opportunities to meet our business objectives, there can be no assurance that additional capital will be available to us in sufficient amounts, in a timely manner and/or on terms favorable to us, if at all. If we are unable to complete one or more private placements near term, or otherwise obtain sufficient financing through strategic collaborations or government grant awards, we may be required to delay, scale back or discontinue certain drug rescue and/or research and development activities, and this may adversely affect our ability to operate as a going concern. If additional funds are obtained by selling equity or debt securities, substantial dilution to existing stockholders may result. Our future working capital requirements will depend on many factors, including without limitation, the scope and nature of our drug rescue and research and development efforts, the success of such programs, our ability to obtain government grant awards and our ability to enter into strategic collaborations with pharmaceutical companies and academic institutions on terms acceptable to us.

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Cash and Cash Equivalents

The following table summarizes changes in cash and cash equivalents for the periods stated (in thousands):

	Fiscal Years Ended March 31,	
	2012	2011
Net cash used in operating activities	$ (3,566)	$ (841)
Net cash used in investing activities	$ (32)	$ (58)
Net cash provided by financing activities, including sale of Units, warrant exercises and issuance of notes in 2012 and issuance of notes and warrants in 2011	$ 3,540	$ 837

Off-Balance Sheet Arrangements

Other than contractual obligations incurred in the normal course of business, we do not have any off-balance sheet financing arrangements or liabilities, guarantee contracts, retained or contingent interests in transferred assets or any obligation arising out of a material variable interest in an unconsolidated entity. We have two inactive, wholly-owned subsidiaries, Artemis Neuroscience, Inc., a Maryland corporation, and VistaStem Canada, Inc., an Ontario corporation.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The disclosures in this section are not required since we qualify as a smaller reporting company.

Item 8. Financial Statements and Supplementary Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders
VistaGen Therapeutics, Inc.
(a development stage company)

We have audited the accompanying consolidated balance sheets of VistaGen Therapeutics, Inc. (a development stage company) as of March 31, 2012 and 2011 and the related consolidated statements of operations, cash flows, preferred stock, and stockholders' deficit for the years then ended, and for the period from May 26, 1998 (inception) through March 31, 2012. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, 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. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of VistaGen Therapeutics, Inc. (a development stage company) at March 31, 2012 and 2011, and the consolidated results of its operations and its cash flows for the years then ended, and for the period from May 26, 1998 (inception) through March 31, 2012, in conformity with U.S. generally accepted accounting principles.

The accompanying consolidated financial statements at March 31, 2012 have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company is a development stage company, has not yet generated sustainable revenues, has suffered recurring losses from operations and has a stockholders' deficit, all of which raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ OUM & CO. LLP

San Francisco, California
July 2, 2012

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VISTAGEN THERAPEUTICS, INC.

(a development stage company)

CONSOLIDATED BALANCE SHEETS

(Amounts in $100's, except share amounts)

	March 31, 2012	March 31, 2011
ASSETS		
Current assets:		
Cash and cash equivalents	$ 81,000	$ 139,300
Unbilled contract payments receivable	106,200	42,200
Prepaid expenses	50,900	23,300
Total current assets	238,100	204,800
Property and equipment, net	74,500	87,700
Security deposits and other assets	29,000	31,100
Total assets	$ 341,600	$ 323,600
LIABILITIES, PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 1,750,800	$ 1,767,100
Accrued expenses	657,300	1,421,900
Notes payable and accrued interest	599,300	160,900
Notes payable and accrued interest to related parties	150,800	50,400
Put option and note term extension option liabilities	-	90,800
Capital lease obligations	10,500	30,100
Non-interest bearing promissory notes, net, including $525,000 to related parties	-	1,105,700
Deferred revenues	13,200	78,800
Convertible promissory notes, including $947,400 to related parties at March 31, 2011 - current portion	-	4,809,200
Accrued interest on convertible promissory notes	-	1,310,800
Total current liabilities	3,181,900	10,825,700
Non-current liabilities:		
Notes payable and accrued interest	2,667,500	2,106,200
Notes payable and accrued interest to related parties	125,100	210,800
Convertible promissory notes, net of current portion	700	3,326,000
Accrued interest on convertible promissory notes	5,300	585,400
Accrued officers' compensation	57,000	57,000
Capital lease obligations	9,700	4,500
Accounts payable	-	1,140,600
Warrant liability	-	417,100
Total non-current liabilities	2,865,300	7,847,600

Total liabilities	6,047,200	18,673,300
Commitments and contingencies		
Preferred stock, no par value; no shares authorized at March 31, 2012; 20,000,000 shares authorized at March 31, 2011; no shares issued and outstanding at March 31, 2012; 2,884,655 shares issued and outstanding at March 31, 2011	-	14,534,800
Stockholders' deficit:		
Preferred stock, $0.001 par value; 10,000,000 shares authorized at March 31, 2012; no shares authorized at March 31, 2011; 437,055 Series A shares issued and outstanding at March 31, 2012; no shares issued and outstanding at March 31, 2011	400	-
Common stock, $0.001 par value at March 31, 2012 and 2011; 200,000,000 and 400,000,000 shares authorized at March 31, 2012 and 2011, respectively; 18,704,267 and 5,241,110 shares issued at March 31, 2012 and 2011, respectively	18,700	5,200
Additional paid-in capital	52,539,500	9,867,400
Treasury stock, at cost, 2,083,858 shares of common stock held at March 31, 2012; no shares held at March 31, 2011	(3,231,700)	-
Notes receivable from sale of common stock to unrelated parties at March 31, 2012 and upon exercise of options and warrants by related parties at March 31, 2011	(250,000)	(184,100)
Deficit accumulated during development stage	(54,782,500)	(42,573,000)
Total stockholders' deficit	(5,705,600)	(32,884,500)
Total liabilities, preferred stock and stockholders' deficit	$ 341,600	$ 323,600

See accompanying notes to consolidated financial statements.

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VISTAGEN THERAPEUTICS, INC.
(a development stage company)
CONSOLIDATED STATEMENTS OF OPERATIONS
(Amounts in $100's, except share and per share amounts)

	Fiscal Years Ended March 31,		May 26, 1998 (Inception) Through March 31,
	2012	2011	2012
Revenues:			
Grant revenue	$ 1,342,200	$ 2,071,000	$ 12,762,700
Collaboration revenue	-	-	2,283,600
Other	-	-	1,123,500
Total revenues	1,342,200	2,071,000	16,169,800
Operating expenses:			
Research and development	5,388,600	3,678,200	26,124,900
Acquired in-process research and development	-	-	7,523,200
General and administrative	4,997,000	4,957,700	27,118,400
Total operating expenses	10,385,600	8,635,900	60,766,500
Loss from operations	(9,043,400)	(6,564,900)	(44,596,700)
Other expenses, net:			
Interest expense, net	(1,893,200)	(3,119,400)	(9,441,500)
Change in put and note extension option and warrant liabilities	(78,000)	203,900	- 418,500
Loss on early extinguishment of debt	(1,193,500)	-	(1,193,500)
Other income	200	(200)	47,500
Loss before income taxes	(12,207,900)	(9,480,600)	(54,765,700)
Income taxes	(1,600)	(1,600)	(16,800)
Net loss	$ (12,209,500)	$ (9,482,200)	$ (54,782,500)
Basic and diluted net loss per common share	$ (0.83)	$ (1.81)	
Weighted average shares used in computing basic and diluted net loss per common share	14,736,651	5,241,110	

See accompanying notes to consolidated financial statements.

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VISTAGEN THERAPEUTICS, INC.

(a development stage company)

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Amounts in $100's)

	Fiscal Years Ended March 31,		Period From May 26, 1998 (Inception) Through March 31,
	2012	2011	2012
Cash flows from operating activities:			
Net loss	$ (12,209,500)	$ (9,482,200)	$ (54,782,500)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	45,600	45,300	743,700
Amortization of discounts on 7%, 7.5% and 10% notes	57,200	71,000	259,200
Amortization of discounts on Platinum notes	909,000	1,376,600	3,548,700
Amortization of discounts on August 2010 short-term notes	14,300	557,700	572,000
Amortization of discounts on February 2012 12% convertible notes	(4,200)	-	(4,200)
Change in put and note term extension option and warrant liabilities	77,900	(203,900)	(418,600)
Fair value of Series C preferred stock, common stock, and warrants granted for services prior to the Merger	131,200	-	1,056,600
Stock-based compensation	1,591,300	1,628,800	4,354,300
Loss on early extinguishment of debt	1,193,500	-	1,193,500
Expense related to modification of warrants	741,700	-	741,700
Fair value of common stock granted for services following the Merger	452,000	-	452,000
Fair value of warrants granted for services following the Merger	564,500	-	564,500
Fair value of additional warrants granted under Discounted Warrant Exercise Program	138,100	-	138,100
Fair value of common stock issued for note term modification	22,400	-	22,400
Consulting services by related parties settled by issuing promissory notes	-	-	44,600
Acquired in-process research and development	-	-	7,523,200
Amortization of imputed discount on non-interest bearing notes	-	-	45,000
Gain on sale of assets	-	-	(16,800)
Changes in operating assets and liabilities:			
Unbilled contract payments receivable	(64,000)	205,000	(106,200)
Prepaid expenses and other current assets	(1,900)	630,900	(4,500)
Security deposits and other assets	2,100	4,500	(29,000)
Accounts payable and accrued expenses	2,838,600	4,385,500	16,580,600

Deferred revenues	(65,600)	(60,500)	13,200
Net cash used in operating activities	(3,565,800)	(841,300)	(17,508,500)
Cash flows from investing activities:			
Purchases of equipment, net	(32,400)	(57,800)	(680,800)
Net cash used in investing activities	(32,400)	(57,800)	(680,800)
Cash flows from financing activities:			
Net proceeds from issuance of common stock and warrants, including units	2,679,200	-	2,800,000
Proceeds from exercise of warrants under Discounted Warrant Exercise Program	1,166,300		1,166,300
Net proceeds from issuance of preferred stock and warrants	-	-	4,198,600
Proceeds from issuance of notes under line of credit	-	-	200,000
Proceeds from issuance of 7% note payable to founding stockholder	-	-	90,000
Net proceeds from issuance of 7% convertible notes	-	-	575,000
Net proceeds from issuance of 10% convertible notes and warrants	-	-	1,655,000
Net proceeds from issuance of Platinum notes and warrants	-	-	3,700,000
Net proceeds from issuance of 2008/2010 notes and warrants	-	270,000	2,971,800
Net proceeds from issuance of 2006/2007 notes and warrants	-	-	1,025,000
Net proceeds from issuance of 7% notes payable	-	-	55,000
Net proceeds from issuance of August 2010 short-term notes and warrants	-	800,000	800,000
Net proceeds from issuance of February 2012 12% convertible notes and warrants	466,500	-	466,500
Repayment of capital lease obligations	(14,500)	(27,000)	(100,500)
Repayment of notes	(757,600)	(205,600)	(1,332,400)
Net cash provided by financing activities	3,539,900	837,400	18,270,300
Net increase in cash and cash equivalents	(58,300)	(61,700)	81,000
Cash and cash equivalents at beginning of period	139,300	201,000	-
Cash and cash equivalents at end of period	$ 81,000	$ 139,300	$ 81,000
Supplemental disclosure of cash flow activities:			
Cash paid for interest	$ 265,400	$ 147,400	$ 439,700
Cash paid for income taxes	$ 1,600	$ 1,600	$ 16,800

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VISTAGEN THERAPEUTICS, INC.

(a development stage company)

CONSOLIDATED STATEMENTS OF CASH FLOWS (continued)

(Amounts in $100s, except share amounts)

	Fiscal Years Ended March 31,		Period From May 26, 1998 (Inception) Through March 31,
	2012	2011	2012
Supplemental disclosure of noncash activities:			
Forgiveness of accrued compensation and accrued interest payable to officers transferred to equity	$ -	$ -	$ 800,000
Exercise of warrants and options in exchange for debt cancellation	$ -	$ -	$ 112,800
Settlement of accrued and prepaid interest by issuance of Series C Preferred Stock	$ -	$ -	$ 35,300
Conversion of 10% notes payable, net of discount, and related accrued interest into Series C Preferred stock	$ -	$ -	$ 2,050,300
Issuance of Series B-1 Preferred stock for acquired in-process research and development	$ -	$ -	$ 7,523,200
Conversion of 7% notes payable, net of discount, and related accrued interest into Series B Preferred stock	$ -	$ -	$ 508,000
Conversion of accounts payable into convertible promissory notes	$ -	$ -	$ 893,700
Conversion of accounts payable into note payable	$ -	$ 1,126,200	$ 2,810,300
Conversion of accounts payable into common stock	$ 275,400	$ -	$ 1,824,100
Conversion of accrued interest on convertible promissory notes into common stock	$ -	$ -	$ 921,400
Notes receivable from sale of common stock to related parties upon exercise of options and warrants	$ -	$ -	$ 149,800
Capital lease obligations	$ 19,000	$ -	$ 139,700
Recognition of put option and note term extension option liabilities upon issuance of Platinum Notes	$ -	$ -	$ 141,200
Incremental fair value of put option and note term extension option liabilities from debt modifications	$ -	$ 158,000	$ 479,400

Incremental fair value of note conversion option from debt modification	$ -	$ 1,062,800	$ 1,891,200
Incremental fair value of warrant from debt modifications	$ -	$ 121,100	$ 276,700
Recognition of warrant liability upon adoption of new accounting standard	$ -	$ -	$ 151,300
Fair value of warrants issued with August 2010 short term notes	$ -	$ 130,900	$ 130,900
Note Discount upon issuance of August 2010 short-term notes	$ -	$ 320,000	$ 320,000
Fair value of warrants issued with February 2012 12% convertible notes	$ 542,000	$ -	$ 542,000
Note Discount upon issuance of February 2012 12% convertible notes	$ 495,200	$ -	$ 495,200

See accompanying notes to consolidated financial statements.

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VISTAGEN THERAPEUTICS, INC.
(a development stage company)
CONSOLIDATED STATEMENTS OF PREFERRED STOCK
Period from May 26, 1998 (inception) through March 31, 2012
(Amounts in $100s, except share and per share amounts)

	Preferred Stock (Shares)	Series A Preferred Stock	Series B Preferred Stock	Series B-1 Preferred Stock	Series C Preferred Stock	Total Preferred Stock
Balances at May 26, 1998 (inception)	-	$-	$-	$-	$-	$-
Issuance of Series A preferred stock at $2.302 per share for cash, net of issuance costs of $24,000	429,350	964,200	-	-	-	964,200
Balances at March 31, 2000	429,350	964,200	-	-	-	964,200
Issuance of Series A preferred stock at $2.302 per share for cash, net of issuance costs of $5,500	2,580	500	-	-	-	500
Issuance of Series B preferred stock at $5.545 per share for cash, including conversion of $575,000 face value of 7% convertible notes plus accrued interest of $3,800, net of unamortized discount of $70,800 and issuance costs of $39,800	316,282	-	1,643,300	-	-	1,643,300
Balances at March 31, 2001	748,212	964,700	1,643,300	-	-	2,608,000
Issuance of Series B preferred stock at $5.545 per share for cash, net of issuance costs of $97,200	199,286	-	1,007,800	-	-	1,007,800
Balances at March 31, 2002 and 2003	947,498	964,700	2,651,100	-	-	3,615,800
Issuance of Series B-1 preferred stockat $5.545 for acquired in-process research and development	1,356,750	-	-	7,523,200	-	7,523,200
Balances at March 31, 2004	2,304,248	964,700	2,651,100	7,523,200	-	11,139,000
Issuance of Series C preferred stock at $6.00 per	390,327	-	-	-	2,301,500	2,301,500

share for cash, including conversion of $1,655,000 face value of 10% convertible notes plus accrued interest of $408,600, net of unamortized note discount of $13,200 and issuance costs of $27,200						
Proceeds allocated to warrants issued in connection with Series C preferred stock	-	-	-	-	(25,500)	(25,500)
Balances at March 31, 2005	2,694,575	964,700	2,651,100	7,523,200	2,276,000	13,415,000
Issuance of Series C preferred stock at $6.00 per share for cash, net of issuance costs of $20,700	143,331	-	-	-	839,300	839,300
Issuance of Series C preferred stock at $6.00 per share for services and in payment of interest on line of credit	46,749	-	-	-	280,500	280,500
Balances at March 31, 2006 through March 31, 2011	2,884,655	964,700	2,651,100	7,523,200	3,395,800	14,534,800
Conversion of all series of preferred stock into VistaGen common stock in connection with the Merger	(2,884,655)	(964,700)	(2,651,100)	(7,523,200)	(3,395,800)	(14,534,800)
Balances at March 31, 2012	-	$-	$-	$-	$-	$-

See accompanying notes to consolidated financial statements.

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VISTAGEN THERAPEUTICS, INC.

(a development stage company)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT

Period from May 26, 1998 (inception) through March 31, 2012

(Amounts in $100s, except share and per share amounts)

	Series A Preferred Stock Shares	Series A Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Treasury Stock	Notes Receivable from Sale of Stock	Deficit Accumulated During the Development Stage	Total Stockholders' Deficit
Balances at May 26, 1998 (inception)			-	$-	$ -	$-	$ -	$ -	$ -
Initial sale of common stock for cash to Founder	-	-	1,000,000	1,000	4,000	-	-	-	5,000
Fair value of common stock issued for services	-	-	4,000	-	400	-	-	-	400
Effect of the Merger			1,569,000	1,600	(1,600)	-	-	-	-
Net loss for fiscal year 1999	-	-	-	-	-	-	-	(230,900)	(230,900)
Balances at March 31, 1999	-								