Amarantus Bioscience Holdings, Inc.
Form 10-K
April 06, 2015

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

x ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2014

¨ TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE EXCHANGE ACT

For the transition period from _____ to _____

000-55016 (Commission file number)

Amarantus Bioscience Holdings, Inc.

(Exact name of registrant as specified in its charter)

Nevada	**26-0690857**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

655 Montgomery Street, Suite 900, San Francisco, CA 94111

(415) 688-4484

(Address and telephone number of principal executive offices)

Not Applicable

(Former name, former address and former fiscal year, if changed since last report)

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 ¨ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.

Yes¨ No x

Indicate by check mark whether the issuer (1) filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the past 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 ¨

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 during the preceding 12 months (or such shorter period that the registrant was required to submit and post such files). Yes x No ¨

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 the registrant’s knowledge, in definitive proxy or information statement incorporated by reference in Part III of this Form 10-K or amendment to this Form 10-K. Yes x No ¨

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

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer ¨ (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 Exchange Act). Yes ¨ No x

The aggregate market value of the voting and non-voting common equity held by non-affiliates as of June 30, 2014, was $74,334,000 based upon the closing price of the Company's common stock on June 30, 2014

As of April 3, 2015, there were 1,041,953,973 shares of common stock outstanding.

AMARANTUS BIOSCIENCE HOLDINGS, INC.

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K (including the section regarding Management's Discussion and Analysis or Plan of Operation) contains forward-looking statements regarding our business, financial condition, results of operations and prospects. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not deemed to represent an all-inclusive means of identifying forward-looking statements as denoted in this Annual Report on Form 10-K. Additionally, statements concerning future matters are forward-looking statements.

Although forward-looking statements in this Annual Report on Form 10-K reflect the good faith judgment of our Management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include, without limitation, those specifically addressed under the heading "Risks Factors" below, as well as those discussed elsewhere in this Annual Report on Form 10-K. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K. We file reports with the Securities and Exchange Commission ("SEC"). Our electronic filings with the United States Securities and Exchange Commission (including our Annual Reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and any amendments to these reports) are available free of charge on the Securities and Exchange Commission’s website at http://www.sec.gov. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580 Washington D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Annual Report on Form 10-K, except as required by law. Readers are urged to carefully review and consider the various disclosures made throughout the entirety of this Annual Report, which are designed to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.

Item 1. Description of Business

Company Overview

Amarantus Bioscience Holdings, Inc. (”the Company”) is a California based biopharmaceutical company founded in January 2008. We own or have exclusive licenses to various product candidates in the biopharmaceutical and diagnostic areas of the healthcare industry. We are developing our diagnostic product candidates in the field of neurology, and our therapeutic product candidates in the areas of neurology, psychiatry, ophthalmology and regenerative medicine. Our business model is to develop our product candidates through various de-risking milestones that we believe will be accretive to shareholder value, and will position them to be strategically partnered with pharmaceutical companies, diagnostic companies and/or other stakeholders in order to more efficiently achieve regulatory approval and commercialization.

Principal Products in Development

Amarantus Bioscience has three operating divisions: the diagnostics division; the therapeutics division; and the other drug discovery division.

Diagnostics Division

Within our diagnostics division, we are developing the following product candidates:

LymPro Test ®

The Lymphocyte Proliferation Test (“LymPro Test®”, or “LymPro”) is a diagnostic blood test for Alzheimer’s disease originally developed by the University of Leipzig in Germany. The test works by evaluating the cell surface marker CD69 on peripheral blood lymphocytes following a mitogenic stimulation. The underlying scientific basis for LymPro is that Alzheimer’s patients have a dysfunctional cellular machinery division process that inappropriately allows mature neurons in the brain to enter the mitotic process (cell division /cell cycle). When this happens the neurons start the cell division process, but cannot complete the process. As a result, a number of cytokines and other genes are up-regulated, ultimately leading to cell death by apoptosis. This inappropriate cell division activation process is also present in the lymphocytes of Alzheimer’s patients, as lymphocytes share similar cellular division machinery with brain neurons. We measure the integrity of this cellular machinery division process by measuring CD69 up-regulation in response to the mitogenic stimulation. If CD 69 is up-regulated it means that the cellular machinery division process is correct and Alzheimer’s is not present. If CD69 is not up-regulated, it means there is a dysfunctional cellular machinery division process, and Alzheimer’s is more likely. Data has been published in peer-reviewed publications on LymPro with 160 patients, demonstrating 92% co-positivity and 91% co-negativity with an overall 95% accuracy rating for LymPro.

In 2014, we completed a 'Fit-for-Purpose' assay validation for LymPro at Icon Central Laboratories in Farmingdale, NY, enabling LymPro to be offered to the pharmaceutical industry for diagnosis of patients entering clinical trials for Alzheimer’s disease, as a means of mitigating the risk of selecting the wrong patients for inclusion in such clinical studies. Biomarker services using LymPro Test® biomarker data are now available to the pharmaceutical industry for Investigational Use Only (IUO), in such pharmaceutical therapeutic clinical development programs.

MSPrecise®

In January 2015, we acquired MSPrecise®, which is a proprietary next-generation DNA sequencing (NGS) assay for the identification of patients with relapsing-remitting multiple sclerosis (RRMS) at first clinical presentation. MSPrecise® utilizes next-generation sequencing to measure DNA mutations found in rearranged immunoglobulin genes in immune cells initially isolated from cerebrospinal fluid. If successful, MSPrecis® should augment the current standard of care for the diagnosis of MS, by providing a more accurate assessment of a patient's immune response to a challenge within the central nervous system. MSPrecise® offers a novel method of measuring changes in adaptive human immunity and may also be able to discern individuals whose disease is more progressive and requires more aggressive treatment.

Final results from a pivotal clinical validation study demonstrated that MSPrecise® met the primary study endpoint in patients suspected of having RRMS. MSPrecise® provided a clear improvement in classifying early-stage RRMS patients when compared with the published performance for the current diagnostic standard of care by cerebrospinal fluid (CSF) analysis. In this study, MSPrecise® not only performed well as a standalone test but, when combined with

the current standard of diagnosis, oligoclonal banding (OCB), it demonstrated that it can substantially reduce the number of both false positives and false negatives as compared to use of OCB alone.

Additional Diagnostic Biomarkers

In January 2015, we entered into a one-year, option agreement with Georgetown University for an exclusive license of patent rights related to certain blood based biomarkers for memory loss that Georgetown University and University of Rochester jointly developed and own (the “Georgetown Biomarkers”). In the event that we exercise this option, conditions and milestones will be defined; such as, providing Georgetown with development and commercialization plans for the biomarkers and recruiting a senior executive to lead our diagnostics division, as well as other requirements defined in the option agreement. The diagnostic technologies subject to this option agreement are based on metabolic, genetic and exosomal biomarkers. We believe these may hold additional potential for identifying distinguishing factors in dementia and Alzheimer's disease that will be complementary to our LymPro Test® diagnostic for Alzheimer’s disease. With the potential addition of the Georgetown Biomarkers to our Alzheimer's diagnostics portfolio, we are positioning ourselves to provide all three modalities (cell cycle dysregulation, lipidomics and exosomes) for diagnosis of Alzheimer’s disease.

In May 2013, we acquired the intellectual property rights to two diagnostic blood test platforms known as NuroPro and BC-SeraPro from the bankruptcy estate of Power3 Medical Products. NuroPro is a neurodegenerative disease diagnostic platform with a lead application in Parkinson's disease. BC-SeraPro is an oncology diagnostic platform with a lead application in breast cancer. Further development of our NuroPro and BC-SeraPro diagnostic platforms are on hold, as we apply our resources to the continuing development of our LymPro Test® and MSPrecise diagnostics, as well as our planned development of the Georgetown Biomarkers.

Therapeutics Division

Within the therapeutics division, we are developing the following product candidates:

Eltoprazine

Eltoprazine is a small molecule 5HT1a/1b partial agonist in clinical development for the treatment of Parkinson's disease levodopa-induced dyskinesia (PD LID) and Adult Attention Deficit Hyperactivity Disorder ("Adult ADHD"). Eltoprazine has been evaluated in over 600 human subjects to date, with a very strong and well-established safety profile. Eltoprazine was originally developed by Solvay Pharmaceuticals for the treatment of aggression. Solvay out-licensed the Eltoprazine program to PsychoGenics. PsychoGenics licensed Eltoprazine to Amarantus following successful Phase 2a studies in both PD-LID and Adult ADHD, in which both primary and secondary endpoints were met.

In September 2014, we submitted a request to the FDA for a review and written feedback of our Phase 2b program clinical trial design for Eltoprazine in PD LID. We have received feedback from the FDA on our trial design, and are in the process of preparing a full IND submission for this important therapeutic indication. Following initiation of our Phase 2b program clinical study of Eltoprazine in PD LID, we will submit a request to the FDA regarding further clinical development of Eltoprazine in Adult ADHD. In March 2015, the company received notification of approval from the FDA that IND 124224 was approved and allows the company to commence this clinical trial.

MANF

MANF (mesencephalic-astrocyte-derived neurotrophic factor) is believed to have broad potential because it is a naturally-occurring protein produced by the body for the purpose of reducing and preventing apoptosis (cell death) in response to injury or disease, via the unfolded protein response. MANF was discovered by the Company's Chief Scientific Officer, Dr. John Commissiong. By manufacturing MANF and administering it to the body, Amarantus is

seeking to use a regenerative medicine approach to assist the body with higher quantities of MANF when needed. Amarantus is the front-runner and primary holder of intellectual property around MANF, and is focusing on the development of MANF-based protein therapeutics. MANF has demonstrated efficacy as a disease-modifying treatment in various animal models, including retinitis pigmentosa, Parkinson's disease, cardiac ischemia and stroke.

We made a strategic decision to focus the development of MANF in orphan indications. The FDA Orphan Drug Designation program provides a special status to drugs and biologics intended to treat, diagnose or prevent so-called orphan diseases and disorders that affect fewer than 200,000 people in the U.S. This designation provides for a seven-year marketing exclusivity period against competition, as well as certain incentives, including federal grants, tax credits and a waiver of PDUFA filing fees.

In December 2014, the FDA granted MANF orphan drug designation for the treatment of retinitis pigmentosa (RP). RP refers to a group of inherited diseases causing retinal degeneration often leading to blindness. Pre-clinical data showed that MANF provided protective functional effects in an animal model of RP. Moreover, toxicology studies have demonstrated that MANF was well tolerated following a single intravitreal administration of a therapeutically relevant dose. Our goal is to continue to build value in our MANF program by seeking other orphan drug designations for MANF, and by continuing work to advance this promising product candidate toward clinical testing in multiple therapeutic areas.

Option to Acquire Additional Product Candidate - Engineered Skin Substitute

In November 2014, we entered into an exclusive option agreement to acquire Engineered Skin Substitute (ESS), an autologous skin replacement product for the treatment of Stage 3 and Stage 4 intractable severe burns. As part of the option agreement, we have also agreed to engage Lonza Walkersville, Inc., a subsidiary of Lonza Group Ltd., to produce ESS for human clinical trials and subsequent commercial distribution.

ESS is a tissue-engineered skin prepared from autologous (patient's own) skin cells. It is a combination of cultured epithelium with a collagen-fibroblast implant that produces a skin substitute that contains both epidermal and dermal components. This model has been shown in preclinical studies to generate a functional skin barrier. Most importantly, the researchers consider self-to-self skin grafts for autologous skin tissue to be ideal because they are less likely to be rejected by the immune system of the patient, unlike with porcine or cadaver grafts in which immune system rejection is an important possibility.

ESS has the potential to become a revolutionary new treatment for severe burns. The product is produced from a small sample of the patient's own healthy skin. The sample is harvested from a portion of healthy skin remaining on a burn patient's body and is then shipped to Lonza’s central laboratory facility for expansion. The proprietary ESS technology can then be applied to produce an expanded sample or graft that is sufficiently large enough to close severe wounds covering the majority of an individual's body, including both the epidermal and dermal layers of the skin. The expanded skin samples are then shipped back in rectangular shapes, with the dimensions of approximately 10 inches by 10 inches, to the severe burn center for surgical transplantation onto the original patient to facilitate wound closure. Wound closure is of critical importance in this setting to promote healing and to reduce the risk of a variety of infections, including sepsis.

ESS is being developed with support from a grant from the Armed Forces Institute for Regenerative Medicine (AFIRM). The AFIRM grant was awarded to support the IND and initial clinical studies. Upon execution of our option to acquire ESS, we anticipate initiating, during the second quarter of 2015, a 10 patient Phase 2 clinical study to evaluate the efficacy of ESS versus meshed split thickness autograft, the current standard of care for the treatment of Stage 3 and Stage 4 intractable severe burns.

Drug Discovery Division

MANF was discovered utilizing our proprietary PhenoGuard™ protein discovery technology, and we believe that this drug discovery platform can be used to discover other, similar neurrotrophic factors. Our PhenoGuard™ technology currently consists of 88 cell lines, and we intend to expand the number of such cell lines as we conduct research directed towards the discovery of such additional neurotrophic factors.

Recent Developments

Eltoprazine In-License Agreement– January 2014

Effective January 14, 2014, we entered into a License Agreement with PGI Drug Discovery, LLC ("PGI"), pursuant to which we were granted an exclusive license (with a right to sublicense) to utilize certain of PGI's compounds and products as defined in the License Agreement, which includes certain intellectual property covering the use of Eltoprazine and certain of its related compounds in all therapeutic indications

We paid to PGI $100,000 shortly after execution as an initial license fee, and in July 2014 we paid $500,000 for the clinical supply of Eltoprazine. In addition, we also compensated PGI a total of $650,000 in cash and common stock for earlier research and management of CIAS, ADHD and levodopa induced dyskinesia (LID) clinical trials, and agreed to pay up to an aggregate of $4,000,000 in development milestones through NDA submission. As further consideration for the License Agreement, the Company shall pay PGI a single digit royalty based on its annual worldwide aggregate net sales of Eltoprazine as the product is commercialized.

Simultaneously, the Company and PGI entered into a Services Agreement pursuant to which PGI will provide certain services to the Company related to PGI's proprietary analytical systems as will be set forth in certain study plans. The Company agreed to a payment commitment of $450,000 for a minimum of three years at a minimum annual rate of $150,000.

As partial consideration of the research support payment by the Company to PGI, the Company entered into a Securities Purchase Agreement with PGI, pursuant to which PGI subscribed for 4,000,000 shares of the Company's common stock and the Company granted PGI certain piggy-back registration rights.

MANF In-License Option Agreement– February 2014

On February 28, 2014, we entered into an Option Agreement with the University of Massachusetts ("UMass") pursuant to which the Company was granted an option to obtain an exclusive license (with the right to sublicense) in the patent applications to be filed based upon UMA 14-006 titled "MANF as a Therapeutic Agent for the production of Mammalian Sensory Cells". The term of the option is 18 months which may be extended by us for an additional six months upon demonstration to UMass of continued progress evaluating the business opportunity with respect to the patent rights as well as a payment of an additional $5,000 to UMass. In consideration for the grant of the option, we paid $16,000 for the option and initial patent expenses to be incurred in connection with obtaining the patent rights.

Common Stock Purchase Agreement – March 2014

On March 7, 2014 we entered into a purchase agreement with Lincoln Park Capital Fund, LLC ("Lincoln Park"). Upon signing the purchase agreement, Lincoln Park agreed to purchase 4,000,000 shares of our common stock for $400,000 as an initial purchase under the agreement. We also entered into a registration rights agreement with Lincoln Park and filed a registration statement with the SEC covering the shares that may be issued to Lincoln Park under the purchase agreement. We have the right, in our sole discretion, over a 30-month period, after the effectiveness of the registration statement, to sell up to an additional $19,600,000 of our common stock to Lincoln Park in amounts up to $500,000 per sale, depending on certain conditions as set forth in the Purchase Agreement. There are no upper limits to the price Lincoln Park may pay to purchase our common stock and the purchase price of shares of Common Stock sold pursuant to the Purchase Agreement will be based on prevailing market prices of our Common Stock at the time of sales without any fixed discount, and the Company will control the timing and amount of any sales of Common Stock to Lincoln Park. In addition, the Company may direct Lincoln Park to purchase additional amounts as accelerated purchases if on the date of a regular purchase the closing sale price of the Common Stock is not below the threshold price as set forth in the purchase agreement. Lincoln Park does not have the right or the obligation to purchase any shares of our common stock on any business day that the price of our common stock is below the floor price as set forth in the purchase agreement.

In consideration for entering into the purchase agreement, we issued to Lincoln Park 6,000,000 shares of our common stock and may issue up to an additional 3,500,000 shares pro rata if and when the Company sells Lincoln Park up to an additional $19,600,000 of our common stock. Actual sales of shares of Common Stock to Lincoln Park under the agreement will depend on a variety of factors to be determined by the Company from time to time, including (among others) market conditions, the trading price of the Common Stock and determinations by the Company as to available and appropriate sources of funding for the Company and its operations.

Call of Outstanding Warrants and Debentures– March 2014

On March 7, 2014, the Company accepted elections to exercise certain warrants in the aggregate amount of 60,000,000 shares of common stock for gross proceeds of $3,600,000. The total proceeds from the transaction were received by the Company in the first quarter of 2014. Pursuant to the offer to exercise dated February 13, 2014, as supplemented on March 6, 2014, the holders of outstanding warrants to purchase shares of common stock of the Company at a price of $0.06 (the “Original Warrants”) were offered the opportunity to exercise their Original Warrants and receive warrants (the “New Warrants”) to purchase three (3) shares of common stock of the Company for every four (4) Original Warrants exercised. The New Warrants are exercisable at a price of $0.12 for a term of five (5) years. The New Warrants are callable by the Company if the Volume Weighted Average Price of the Company’s common stock for each of 20 consecutive trading days exceeds $0.18 and certain equity conditions are met. The Company may also call the New Warrants if the closing price of the Company’s common stock exceeds $0.18 on the date that is the earlier of the receipt by the Company of an approval letter for listing of the Company’s common stock on an exchange or listing of the common stock on an exchange. The holders of the New Warrants were granted piggyback registration rights. Upon the closing of the offer to exercise, the Company issued New Warrants to purchase 45,000,000 shares of common stock of the Company.

Memory Dx, LLC Transaction– April 2014

On April 29, 2014, we entered into an asset purchase agreement (the "MDx APA") with Memory Dx, LLC ("MDx") pursuant to which the Company purchased all of the assets of MDx, including all right, title and interest in the LymPro Technology (as defined in the MDx APA). Such assets include all intellectual property, goodwill, patents and all copyrights owned by MDx, subject to certain exclusions and further described in the MDx APA.

As consideration for transfer of the assets pursuant to the MDx APA, we paid MDx $150,000 and issued 1,500,000 shares of the Company's common stock. We also agreed to provide MDx with piggy-back registration rights with respect to such shares.

Contingent upon (i) the Company entering into a direct licensing agreement with the University of Leipzig ("Leipzig") pursuant to which Leipzig would grant the Company a direct license to certain assets licensed to MDx by Leipzig, and (ii) MDx terminating the license agreement it held with Leipzig as it relates to such licensed assets with the Company's prior written consent, we agreed to issue to MDx, upon the date ten days after the execution of a direct license agreement between the Company and Leipzig, 6,500,000 shares of the Company's common stock and provide MDx with piggy-back registration rights with respect to such shares.

Washington University Transaction – June 2014

On June 19, 2014, we entered into a sponsored research agreement with The Washington University ("WashU") pursuant to which Dr. Fumihiko Urano, PhD. ("Urano"), an employee at WashU, shall perform certain research utilizing a proprietary compound of the Company's (the "Materials").

We agreed to provide financial support for the WashU research plan (the "WashU Research Plan"), in aggregate amount of $120,000, $60,000 of which has been paid and $60,000 which shall be paid within 30 days from the date we receive the final written report of Urano, pursuant to the Agreement. The research results that arise from the WashU Research Plan as well as any inventions conceived and created jointly by the parties ("WashU Joint Inventions") shall be jointly owned by us and WashU.

Additionally, WashU granted us (i) a non-exclusive, worldwide, royalty free license to utilize any inventions belonging solely to WashU conceived in WashU's performance of the WashU research Plan ("WashU Inventions"), and (ii) an exclusive option to obtain an exclusive, worldwide license with a right to grant sublicenses to utilize any WashU Inventions or WashU Joint Inventions upon terms to be negotiated in good faith (the WashU "Option"). We may exercise such WashU Option within ninety (90) days of receipt of notice of such WashU Invention, which will begin a six month period in which the parties shall negotiate a license agreement to such WashU Invention

during which WashU shall not grant any other party a license to such WashU Invention. If the parties are not able to agree on a license agreement after negotiating in good faith for such six month period, then WashU shall be permitted to negotiate with third parties, provided that for a period of one year after such six month negotiation period ends, WashU shall not grant a third party a license to such WashU Invention on terms less favorable than our final offer to WashU.

Call of Outstanding Warrants

On July 9, 2014, we met the conditions to call our remaining outstanding warrants to purchase shares of our common stock at an exercise price of $0.06 per share issued in our private placement offering completed on September 3, 2013 and September 26, 2013. We called the warrants for cancellation at a price of $0.001 per warrant share. Pursuant to the terms of the Original Warrants, we agreed to honor any exercise notices received before the 10 trading days after the call notice was received by the holders. Prior to the expiration of the 10 trading day period, an aggregate of 82,916,585 warrants were exercised and the Company received proceeds of approximately $4,975,000.

Conversion of Senior Convertible Debentures

During 2014, we also met the conditions to force the conversion of our outstanding 8% Original Issue Discount Senior Convertible Debentures due September 6, 2014 and October 1, 2014. Upon forced conversion of the then outstanding Debentures in the amount of $3,333,332 and interest of $124,669 we issued an aggregate of 86,473,409 shares of our common stock representing the outstanding principal amount and accrued interest.

Universität Leipzig Transaction– July 2014

On July 31, 2014, we entered into an Option Agreement with the Universität Leipzig ("Leipzig") pursuant to which we were granted an option to obtain an exclusive license (with the right to sublicense) the patent rights relating to PCT Application No. PCT/EP2010/000702 entitled "Vector(s) Containing an Inducible Gene Encoding a CDK4/CDK6 Inhibitor Useful for Treating Neurodegenerative Disorders or Diseases Associated with an Unscheduled Activation of the Cell Cycle". We paid an option fee of $10,000 for patent rights for a 12 month option. This option may be extended for an additional six months upon payment of an extension fee of $5,000. The Option Agreement contemplates that the parties will use good faith efforts to execute a sponsored research agreement and provides that upon exercise of the option, the parties will use good faith efforts to execute a license agreement within three months of the exercise of the option. During the option term we will reimburse Leipzig for reasonable patent expense and inventor incentives.

Buck Institute Transaction – August 2014

On August 5, 2014, we entered into a sponsored research agreement with the Buck Institute for Research on Aging (the "Institute") pursuant to which Dr. Heinrich Jasper will direct certain research utilizing Mesencephalic-Astrocyte-derived Neurotrophic Factor, subject to certain terms and restrictions as further described in the Agreement.

Pursuant to the Agreement, we will provide financial support for the Buck Institute research plan, which is further described in the Agreement (the "Buck Institute Research Plan"), in the form of four quarterly payments of $75,099, based upon the budget set forth in the Agreement (the "Funding"). Any Buck Institute inventions conceived and created jointly by the parties ("Buck Institute Joint Inventions") as a result of the Buck Institute Research Plan shall be jointly owned by the Company and the Institute. Any Buck Institute inventions conceived and created solely by the Buck Institute ("Buck Institute Inventions") as a result of the Research Plan shall be owned solely by the Institute.

In consideration for the Funding, the Institute granted the Company (i) a non-exclusive, worldwide, royalty free license to utilize any of the Institute Inventions or Joint Inventions for research purposes, and (ii) an exclusive option to obtain an exclusive, worldwide license with a right to grant sublicenses to utilize any Buck Institute Inventions or Buck Institute Joint Inventions upon terms to be negotiated in good faith (the "Buck Institute Option"). The Company may exercise such Buck Institute Option within sixty (60) days of receipt of notice of such Buck Institute Invention. Moreover, the Institute shall not make an offer to a third-party for an exclusive license of any of Buck Institute Intentions or Buck Institute Joint Inventions without first making the same offer to the Company, which the Company may accept within 30 days.

University of Miami – August 2014

On August 14, 2014, we exercised our 2013 exclusive University of Miami option to license intellectual property related to MANF's utility in treating retinal disorders from the University of Miami's Bascom Palmer Eye Institute, and have entered into an exclusive license for the intellectual property. Under the terms of the agreement, we have been granted a perpetual, exclusive worldwide license to intellectual property, covering the use of MANF for the treatment of retinal disorders, including Retinitis pigmentosa.

The license agreement covers the use of the MANF-Family of proteins (MANF and CDNF) for retinal diseases including age-related macular degeneration, glaucoma, inherited retinal disorders (including Retinitis pigmentosa), sporadic retinal disorders, other degenerative retinal disorders, and retinal injuries. We own composition of matter patents and various composition and method of use patent applications for MANF and derivative sequences for protein therapeutic, gene therapy and certain cell therapy applications worldwide.

As part of the license agreement we have the right of first negotiation to future patent(s) and patent application(s).

In consideration for the license we will pay annual fees which may be applied to amounts due to the University upon achievement of certain clinical milestones by the Company as well as to royalties on sales as well as patent fees.

Subsequently on October 1, 2014, we entered into a Sponsored Research Agreement ("SRA") with the University to support the University's MANF research. The SRA calls for us to provide three payments of $51,600 each, the first due 30 days following the executed SRA, the second due six months from the effective date and the third and final payment due within 30 days of the investigator's final written report.

Acquiring Engineered Skin Substitute Intellectual Property - Lonza Walkersville

In May 2014, we entered into discussions with Lonza Walkersville, Inc. ("Lonza) to acquire from Lonza its wholly owned subsidiary Cutanogen Corporation ("Cutanogen"), which is the licensee of certain Engineered Skin Substitute ("ESS") intellectual property used to manufacture a product being developed to treat burn related injuries. At the time, Lonza was engaged in a lawsuit brought by Regenicin, Inc. relating to certain licensing rights associated with ESS. In order for the Company to acquire Cutanogen from Lonza, a resolution to the lawsuit was needed.

On October 27, 2014, we entered into an Agreement (the "Lonza Option Agreement") with Lonza pursuant to which we were granted an exclusive option to acquire Cutanogen (the "Option"). The terms of the acquisition are set forth in a draft Share Purchase Agreement (the "SPA") that has been negotiated between the Company and Lonza. Pursuant to the SPA, we would purchase all of the shares of Cutanogen as well as certain assets of Lonza (the "Lonza Assets") as listed in the draft SPA.

As set forth in the SPA, and as consideration for the Cutanogen shares, we will make payments to Lonza, based upon the following milestone schedule:

- $4,000,000 upon execution of the SPA;
- $1,000,000 upon (i) successful completion of a Phase 1 clinical trial, or (ii) submission for a Humanitarian Use Exemption or similar exemption ("HUE") for ESS (whichever occurs sooner); and
- $4,000,000 upon submission of a Biologic License Application to the Food and Drug Administration ("FDA") or the approval of an HUE by the FDA or European Medicines Agency ("EMA") (whichever occurs sooner).

In addition, the Company will pay to Lonza two percent (2%) of Net Sales (as defined in the SPA) of each Earnout Product (as defined in the SPA).

The company entered into an Option and Option amendments with Lonza that extended the Option period, and provided additional time for the Company to raise capital, and settle the Regenicin lawsuit. The Option and Option amendments provided that the Company would be required to make certain additional payments to Lonza, as described below. These payments are summarized below:

- $250,000 for the option period from November 7, 2014 to December 31, 2014,
- $400,000 for the option period from January 1, 2015 to February 28, 2015 and
- $300,000 for the option period from March 1, 2015 to March 31, 2015.

On March 27, 2015, the Company entered into a third amendment to the Option that further extended the Option period from March 31, 2015 to August 31, 2015, on a month-by-month basis. In connection with this third amendment, the Company will make additional periodic payments to Lonza, a portion of which will fund Lonza's continuing ESS development activity. Upon execution of this third amendment, the Company paid $350,000 to Lonza on March 31, 2015 and will pay the following additional amounts to Lonza until the earlier of such time as the Option is exercised or August 31, 2015:

- $400,000 on April 30, 2015 for the option period of April 1, 2015 to April 30, 2015,
- $600,000 on May 31, 2015 for the option period of May 1, 2015 to May 31, 2015,
- $600,000 on June 30, 2015 for the option period of June 1, 2015 to June 30, 2015 and
- $600,000 on July 31, 2015 for the option period of July 1, 2015 to July 31 2015

If the Company exercises the Option and consummates the SPA prior to any option payment being due, then no further payment(s) shall be required. In the event the SPA is not consummated, then the Company will incur a $1,000,000 break-up fee payable to Lonza.

The second step in the acquisition of ESS required the Company to enter into an Asset Purchase Agreement (the "Regenicin APA") with Regenicin, Inc. ("Regenicin") and other interested parties under which the Company agreed to acquire certain assets of Regenicin (the "Assets"), including (i) rights to the aforementioned lawsuit that Regenicin brought against Lonza (the "Litigation"), and (ii) all intellectual property rights held by Regenicin, related to any engineered skin technology for the treatment of severe burns in humans, including any related trademarks. The Regenicin APA was executed October 27, 2014. As consideration to Regenicin, the Company agreed to pay to Regenicin a total of $3,600,000 and 37,500,000 shares of Amarantus common stock. The shares were issued to Regenicin in November 2014 (valued at approximately $3,000), along with cash payments of $1,100,000. The remaining cash payments of $2,500,000 due to Regenicin under the Regenicin APA were paid by the end of February 2015. The asset purchase was recorded at its fair value as in-process research and development expense.

In addition to the Litigation and intellectual property noted above, the Company received from Regenicin an exclusive five (5) year option to license additional intellectual property related to severe burn products developed by Regenicin for an exercise price of $10,000 plus a royalty of 5% on gross revenues in excess of $150,000.

As a result of the Regenicin APA, the Company was able to acquire the Litigation, which it subsequently dismissed with prejudice. The Company is now able to pursue the execution of the Option and the SPA with Lonza to acquire Cutanogen.

Series E Preferred Stock Financing– November 2014 – March 2015

During the period from November 2014 through March 2015, the Company entered into securities purchase agreements pursuant to which the Company sold and issued an aggregate of 7,779 shares of its Series E 12% Convertible Preferred Stock (”Series E Preferred Stock”) for gross proceeds of approximately $7,000,000. The Series E shareholders also received a 10% original issue discount at the time of their investment. Each share of Series E Preferred Stock has a stated value of $1,000 and pays quarterly 12% cumulative dividends per annum. Dividends are payable by the Company in cash or at the Company’s option, in shares of common stock if certain conditions are met. Each share of Series E Preferred Stock is convertible as of the original issuance date, into shares of common stock by dividing the stated value per share by the then effective conversion price. The conversion price for the Series E Preferred Stock shall initially be equal $0.08 per share, subject to adjustment under certain equity conditions beginning 6 months from the closing date. The holder of Series E Preferred Stock shall have the right to vote on all matters submitted to the Company’s shareholders and shall be entitled to such number of votes on an as -converted basis. In March 2015, 500 of these shares were converted into 6,250,000 shares of common stock.

DioGenixTransaction– January 2015

On January 8, 2015, we entered into an Agreement and Plan of Merger (the “Merger Agreement”) with DioGenix, Inc., a Delaware corporation (“DioGenix”), Neuro Acquisition Corporation, a wholly-owned subsidiary of the Company and Nerveda, LLC, as the Securityholder Representative.

The Merger Agreement provides for the merger of Neuro Acquisition Corporation with and into DioGenix (the “Merger”), with DioGenix surviving the Merger as a wholly-owned subsidiary of the Company. The aggregate consideration for all of the outstanding equity interests of DioGenix is 99,378,881 shares of our common. The Merger Agreement also provides for additional payments to DioGenix stockholders of up to $2,000,000 in cash and/or common stock conditioned on the achievement of certain milestones related to results of clinical testing and future revenue from products in development. A portion of the consideration will be placed into escrow to satisfy certain indemnification obligations of DioGenix stockholders described in the Merger Agreement. The shares of our common stock issued in the Merger, may, upon our request, be made subject to lock-up agreements precluding sale of such shares as described in the Merger Agreement.

The Merger Agreement also includes registration rights whereby we will file a registration statement with the Securities and Exchange Commission covering the Stock Consideration within 120 days of the closing of the Merger, subject to certain terms and conditions.

Georgetown University Transaction– January 2015

On January 13, 2015, we entered into an Exclusive Option Agreement (the "GU Option Agreement") with Georgetown University ("GU") pursuant to which we were granted an option to obtain an exclusive license (with the right to sublicense) from Georgetown based upon certain patented technologies entitled "BLOOD BASED BIOMARKERS FOR MEMORY LOSS" (the "Technologies"). The term of the option is 12 months which may be extended mutual written consent of the parties. In consideration for the grant of the option, we paid an option fee of $75,000.

Prior to exercise of the option, we must (i) satisfy certain milestones as further described in the agreement, (ii) obtained financing of at least $10,000,000 of which $3,000,000 shall be used to commercialize the Technologies, (iii) shall have sponsored at least $500,000 worth of research at Georgetown throughout the course of the term of the Agreement, and (iv) has submitted, to GU, a business plan for commercialization of the Technologies.

The agreement contemplates that the parties, upon exercise of the Option, will use good faith efforts to execute a license agreement within 120 days of the exercise of the Option.

DEVELOPMENT PLAN

Diagnostics Division

We are evaluating strategic options regarding our Diagnostics Division, including, but not limited to, a potential spin-off or divestiture of this division. However, prior to taking any such action, we intend to structure the Diagnostics Division as a wholly-owned subsidiary of the Company with a separate management team that will oversee the development and commercialization of our diagnostic products for the diagnosis of Alzheimer's disease and multiple sclerosis ("MS").

We are developing and preparing to commercialize our LymPro Test product as a diagnostic test for Alzheimer's disease, and our MSPrecise product as a diagnostic test for multiple sclerosis.

LymPro Test. In 2014, we completed a 'Fit-for-Purpose' assay validation for LymPro at Icon Central Laboratories in Farmingdale, NY, enabling LymPro to be offered to the pharmaceutical industry for diagnosis of patients entering clinical trials in Alzheimer's disease as a means of mitigating the risk of selecting the wrong patients for inclusion in such clinical studies. Biomarker services using LymPro Test biomarker data are now available to the pharmaceutical industry for Investigational Use Only (IUO) in such pharmaceutical therapeutic clinical development programs. In addition, we intend to commercialize LymPro as a Laboratory Developed Test ("LDT") under the Clinical Laboratory Improvement Amendments ("CLIA") in the second half of 2015 in the United States. As part of the commercialization process, the Company is actively evaluating its options with respect to appropriate CLIA labs, and is also evaluating the potential to build or acquire its own laboratory for this purpose. Thereafter, we will evaluate our options with respect to ex-US commercialization of LymPro, as well as ultimately U.S Food and Drug Administration ("FDA") approval and marketing of LymPro in the United States.

MSPrecise. We believe that MSPrecise will augment the current standard of care for the diagnosis of MS by providing a more accurate assessment of a patient's immune response to a challenge within the central nervous system. Final results from a pivotal clinical validation study demonstrated that MSPrecise provided a clear improvement in classifying early-stage MS patients when compared with the published performance for the current diagnostic standard of care by cerebrospinal fluid (CSF) analysis. In this study, MSPrecise not only performed well as a standalone test but, when combined with the current standard of diagnosis, oligoclonal banding (OCB), it demonstrated that it can substantially reduce the number of both false positives and false negatives as compared to use of OCB alone. We intend to commercialize MSPrecise as a laboratory developed test ("LDT") under the Clinical Laboratory Improvement Amendments ("CLIA") in the second half of 2015 in the United States. As part of the commercialization process, the Company is actively evaluating its options with respect to appropriate CLIA labs, and is also evaluating the potential to build or acquire its own laboratory for this purpose. Thereafter, we will evaluate our options with respect to ex-US commercialization of MSPrecise, as well as ultimately U.S Food and Drug Administration ("FDA") approval and marketing of MSPrecise in the United States.

Additional Diagnostic Biomarkers. We intend to exercise our exclusive option agreement with Georgetown University for an exclusive license for the patent rights related to certain blood based biomarkers for memory loss that Georgetown University and the University of Rochester jointly own (the "Georgetown Biomarkers"). Upon exercise of this option, and execution of this exclusive license, we intend to develop the Georgetown Biomarkers as additional diagnostic tests for Alzheimer's disease. We believe the Georgetown Biomarkers will be complementary to our LymPro® Test diagnostic for Alzheimer's disease. With the potential addition of the Georgetown Biomarkers to our Alzheimer's diagnostics portfolio, we are positioning our Diagnostics Division to be able to provide three modalities (cell cycle dysregulation, lipidomics and exosomes) for the diagnosis of Alzheimer's disease.

Within our Diagnostics division we also have two blood test platforms known as NuroPro and BC-SeraPro. NuroPro is a neurodegenerative disease diagnostic platform with a lead application in Parkinson's disease. BC-SeraPro is an oncology diagnostic platform with a lead application in breast cancer. Further development of our NuroPro and BC-SeraPro diagnostic platforms are on hold as we apply our resources to the continuing development of our LymPro Test and MSPrecise diagnostics, as well as our planned development of the Georgetown Biomarkers.

Therapeutics Division

Within our Therapeutics Division, we are developing Eltoprazine and MANF.

Eltoprazine. Eltoprazine is a small molecule 5HT1a/1b partial agonist in clinical development for the treatment of Parkinson's disease levodopa-induced dyskinesia (PD LID) and Adult Attention Deficit Hyperactivity Disorder ("Adult ADHD"). To date, Eltoprazine has been evaluated in over 600 human subjects, with a very strong and well-established safety profile. Additionally, Eltoprazine achieved positive results in two Phase 2a studies in both PD-LID and Adult ADHD, in which both primary and secondary endpoints were met. In September 2014, we submitted a request to the FDA for a review and written feedback of our Phase 2b program clinical trial design for Eltoprazine in PD LID. We have received feedback from the FDA on our trial design, and are in the process of preparing a full IND submission for this important therapeutic indication. Following initiation of our Phase 2b program clinical study of Eltoprazine in PD LID, we intend to submit a request to the FDA regarding further clinical development of Eltoprazine in Adult ADHD.

MANF. MANF (mesencephalic-astrocyte-derived neurotrophic factor) is believed to have broad potential because it is a naturally-occurring protein produced by the body for the purpose of reducing and preventing apoptosis (cell death) in response to injury or disease, via the unfolded protein response. MANF has demonstrated efficacy as a disease-modifying treatment in various animal models, including retinitis pigmentosa, Parkinson's disease, cardiac ischemia and stroke. We are focusing the development of MANF in orphan indications. The FDA Orphan Drug Designation program provides a special status to drugs and biologics intended to treat, diagnose or prevent so-called orphan diseases and disorders that affect fewer than 200,000 people in the U.S. This designation provides for a seven-year marketing exclusivity period against competition, as well as certain incentives, including federal grants, tax credits and a waiver of PDUFA filing fees.

In December 2014, the FDA granted MANF orphan drug designation for the treatment of retinitis pigmentosa (RP). RP refers to a group of inherited diseases causing retinal degeneration often leading to blindness. Pre-clinical data showed that MANF provided protective functional effects in an animal model of RP. Moreover, toxicology studies have demonstrated that MANF was well tolerated following a single intravitreal administration of a therapeutically relevant dose. We are currently sourcing contract manufacturers for clinical-grade MANF and are beginning to establish study designs for the initiation of clinical studies with MANF in late 2016. Our goal is to continue to build value in our MANF program by seeking other orphan drug designations for MANF, and by continuing work to advance this promising product candidate toward clinical testing in multiple therapeutic areas, including retinitis pigmentosa, Parkinson's disease, and Wolfram Syndrome.

Option to Acquire Additional Product Candidate - Engineered Skin Substitute. In November 2014, we entered into an exclusive option agreement to acquire Engineered Skin Substitute (ESS), an autologous skin replacement product for the treatment of Stage 3 and Stage 4 intractable severe burns. As part of the option agreement, we have also agreed to engage Lonza Walkersville, Inc., a subsidiary of Lonza Group Ltd., to produce ESS for human clinical trials and subsequent commercial distribution. Upon execution of our option to acquire ESS, we anticipate initiating, during the second half of 2015, a 10 patient Phase 2 clinical study to evaluate the efficacy of ESS versus meshed split thickness autograft, the current standard of care for the treatment of Stage 3 and Stage 4 intractable severe burns.

Drug Discovery Division

Within our Drug Discovery Division we have **a** proprietary protein discovery technology called PhenoGuard. MANF was discovered utilizing our PhenoGuard™ protein discovery technology, and we believe that this drug discovery platform can be used to discover other, similar neurrotrophic factors. Our PhenoGuard technology currently consists of 88 cell lines, and we intend to expand the number of such cell lines as we conduct research directed towards the discovery of such additional neurotrophic factors.

MARKET

Diagnostics for Alzheimer's Disease

Alzheimer's disease (AD) is a chronic neurodegenerative disorder affecting millions of people worldwide. It is the number one form of dementia in the world. The risk of being afflicted with AD increases with age, with one in nine people over the age of 65 having the disease. The prevalence of the disease is approximately 5,200,000 individuals in the US. On the other hand, the incidence (or rate at which new cases of disease develop) is age dependent with approximately 53 new cases per 1,000 people age 65 to 74, 170 new cases per 1,000 people age 75 to 84, and 231 new cases per 1,000 people age 85 and older, with 454,000 new cases occurring in 2010 [Alzheimer's Association, 2013 Alzheimer's Disease Facts and Figures, Alzheimer's & Dementia, Volume 9, Issue 2]. AD is also the sixth leading cause of death across all ages in the United States [AA2013: 113], and its prevalence is expected to quadruple by 2050. It is estimated that the cost of caring for people with AD and other dementia's will increase from an estimated $203 billion in 2013 to a projected $1.2 trillion per year by 2050 with Medicare and Medicaid covering approximately 70% of such costs.

The cause and progression of Alzheimer's disease are not well understood. As of 2012, more than 1000 clinical trials have been or are being conducted to find ways to treat the disease, but it is unknown if any of the tested treatments will work.

According to the Alzheimer’s Disease Foundation. It is widely accepted that with the increasing trend towards a longer lifespan coupled with the baby-boomer population approaching retirement, the incidence of Alzheimer’s disease is likely to double in the next 20 years. The exponential increase in the expected number of patients presenting with AD not only represents a major area of unmet medical need, but it also represents a significant market opportunity for diagnostics for this disease. AD biomarker sales are currently at 1.5 billion USD, but are expected to double within the next 5 years (BCC research 2013).

Current clinical research focuses on the early phases of the disease. However, no accurate and convenient tools are available today for pre-dementia diagnosis of AD to support these efforts. Currently AD is diagnosed as a clinical entity using a process that combines cognition assessments with imaging- and spinal-fluid (CSF) tests. This diagnostic procedure may last for several months to a year and is usually initiated late in the disease development.

Several companies are focusing on blood as a test material. Typically these companies employ a multi-assay strategy (multiple RNAs or proteins) combined with advanced statistical tools/algorithms to develop disease-specific diagnostic models.

Diagnostics for Multiple Sclerosis

Multiple sclerosis (MS) is a disease in which the patient’s immune system attacks the protective sheath (myelin) that covers nerves. Myelin damage disrupts communication between the brain and the rest of the body. Ultimately, the nerves themselves may deteriorate, a process that is currently irreversible.

Signs and symptoms vary widely, depending on the amount of damage and which nerves are affected. Some people with severe MS may lose the ability to walk independently or at all, while others experience long periods of remission during which they develop no new symptoms. There is no cure for multiple sclerosis. However, treatments can help speed recovery from attacks, modify the course of the disease and manage symptoms.

There are no specific diagnostic tests for MS. The diagnosis relies on ruling out other conditions that might produce similar signs and symptoms. The physician is likely to start with a thorough medical history and examination that may include the following:

• Blood tests, to help rule out infectious or inflammatory diseases with symptoms similar to MS.

• Spinal tap (lumbar puncture), in which a small sample of fluid is removed from the spinal canal for laboratory analysis. This sample can show abnormalities in white blood cells or antibodies that are associated with MS. Spinal tap can also help rule out viral infections and other conditions with symptoms similar to MS.

• Magnetic resonance imaging (MRI) which can reveal areas of MS (lesions) on the brain and spinal cord. The patient may receive an intravenous dye to highlight lesions that indicate the disease is in an active phase.

The current standard of care method of diagnosis for MS involves the time-intensive analysis of cerebral spinal fluid (CSF) through the oligoclonal banding (OCB) test, as well as MRI, as well as a comprehensive set of clinical tests to rule-out other neurological diseases.

In addition to undergoing several examinations, there is also the risk of false positives. OBC's test accuracy, for instance, is about 54% to 69%, which increases the chance for unnecessary and expensive treatments while delaying the real diagnosis. Misdiagnosis rates of over 50% have been routinely reported, as the cost for mis-prescribing MS treatments for patients with a false positive diagnosis has grown to an estimated $100,000 and $250,000.

There is currently an unmet need for a more accurate diagnostic for MS. Patients that present with MS-like clinical symptoms and evidence of non-specific neurological disease undergo a battery of tests in a diagnostic process that can take months or even years to complete. Unfortunately, the OCB test yields a high rate of false positive results, which can unnecessarily expose patients who do not have MS to chronic and expensive therapy that, in some cases, actually exacerbates their underlying disease. Alternatively, false negatives can delay the proper treatment of those patients who do have MS, possibly accelerating the development of permanent physical disability.

Treatments for Parkinson's Disease Levodopa Induced Dyskinesia

Parkinson's disease (PD) is a severe neurological disorder characterized by tremor, muscle rigidity, and an inability to walk with a steady gait. According to a 2008 report generated by DataMonitor, there are over 4,000,000 PD patients worldwide spending in excess of $3 billion annually on treatments. It is widely accepted that with the increasing trend towards a longer lifespan coupled with the baby-boomer population approaching retirement, the incidence of Parkinson's disease is likely to double in the next 20 years.

Levodopa (also known as L-dopa) remains the gold standard for the treatment of the debilitating motor symptoms of PD. A side effect of prolonged treatment with levodopa is the occurrence of levodopa-induced dyskinesia (PD-LID). PD-LID is characterized by involuntary non-purposeful movements of the head and neck, arms, legs or trunk. With continued levodopa treatment, and as PD progresses, PD-LID can become severely disabling and has been associated with a decrease in the quality of life for Parkinson's patients. One-third of patients develop PD-LID within four to six years of beginning levodopa treatment; this increases to approximately 90% after nine or more years. There are currently no medications approved for the treatment of PD-LID. Reducing PD-LID is one of the greatest patient unmet medical needs in the treatment of advanced PD according to the Michael J. Fox Foundation.

Although no drug is currently approved by the U.S. Food and Drug Administration ("FDA") for PD-LID, several small and medium studies (enrolling fewer than 70 patients) have demonstrated efficacy using a drug called Amantadine.

We believe that the potential market opportunity for a drug that could treat PD-LID exceeds $750M annually in the United States alone. With the population aging and average age of diagnosis being 58-62 years, we believe the market growth is significant (2-3%/year).

Treatments for Adult Attention Deficit Hyperactivity Disorder

Attention deficit hyperactivity disorder (ADHD) is a psychiatric disorder of the neurodevelopmental type in which there are significant problems of attention, hyperactivity, or acting impulsively. The condition can be difficult to tell apart from other disorders as well as that of high normal activity. ADHD management usually involves some combination of counseling, lifestyle changes, and medications. Most healthcare providers accept ADHD as a genuine disorder with debate in the scientific community mainly around how it is diagnosed and treated. The company estimates that the ADHD treatment market worldwide approaches $8 billion annually.

Treatments for Retinitis Pigmentosa

Retinitis Pigmentosa (RP) refers to a group of inherited diseases causing retinal degeneration. The cell-rich retina lines the back inside wall of the eye and is responsible for capturing images from the visual field. People with RP experience a gradual decline in their vision because photoreceptor cells (rods and cones) die. Symptoms include a progressive degeneration of peripheral and night vision as well as the degeneration in color perception and central vision; night blindness is one of the earliest and most frequent symptoms of RP. RP is typically diagnosed in adolescents and young adults. The rate of progression and degree of visual loss varies from person to person. Most people with RP are legally blind by age 40.

Treatments for Severe Burns

A burn is a type of injury to flesh or skin caused by heat, electricity, chemicals, friction, or radiation.[1] Burns that affect only the superficial skin are known as superficial or first-degree burns. When damage penetrates into some of the underlying layers, it is a partial-thickness or second-degree burn. In a full-thickness or third-degree burn, the injury extends to all layers of the skin. A fourth-degree burn additionally involves injury to deeper tissues, such as muscle or bone.

The treatment required depends on the severity of the burn. Superficial burns may be managed with little more than simple pain relievers, while major burns may require prolonged treatment in specialized burn centers Full-thickness burns usually require surgical treatments, such as skin grafting.

While large burns can be fatal, modern treatments developed since 1960 have significantly improved the outcomes, especially in children and young adults. Globally, about 11,000,000 people seek medical treatment, and 300,000 die from burns each year. In the United States, approximately 4% of those admitted to a burn center die from their injuries. The long-term outcome is primarily related to the size of burn and the age of the person affected.

According to the American Burn Association, there are currently over 2,000 cases annually involving burns covering over 50% of the patient's total body surface area

COMPETITION

Diagnostics for Alzheimer's Disease

Cerebrospinal Fluid (CSF)

CSF samples and protein assays of particular analytes remain today the best tools in the diagnosis of Alzheimer's disease and encephalitis. The procedure involves a lumbar puncture - the insertion of a hallow cannula or needle into the lower spinal column in order to collect 5-10 ml of blood free CSF. Until recently there have not been any in vitro diagnostic quality assays available to replace the lumbar puncture diagnostic procedure and there may not be until Saladax / Ortho Clinical Diagnostics or Roche Diagnostics release their publically report CSF Ab42 and CSF Tau assays.

Positron Emission Tomography (PET)

PET requires large, multi-million dollar cameras which collect the radioactive decay of minute quantities of hot radioactive tracers injected into the blood stream. The tracers emit correlated photo pairs which indicate where the tracer is staining tissue in vivo. FDG-PET is an FDA-approved tracer which measures glucose metabolism and has been successfully used to image brain energy consumption. More recently Amyvid from Avid Radiopharmaceuticals, now Lilly Diagnostics, received FDA approval as an in vivo radiotracer to label the amyloid plaques of the brain.

These studies typically cost $3,000-$5,000 per imaging session per patient and require patients travel to a facility with a PET facility rather than receive a diagnostic test in their clinician's office.

Magneto encephalography (MEG)

MEG instruments which are both physically large and costly to facilities wishing to purchase them, employ advanced superconducting magnets operating in near absolute zero temperature to measure minute brain currents. They are scarcely available in the US and Japan, let alone any other country in the world. They are primarily used for research and will likely never become commonplace in clinical practice due to their size and cost.

Magnetic Resonance Imaging (MRI)

MRI instruments are able to measure the gross anatomy of the brain within the skull with resolution approaching 100 microns in a standard 1.5T clinical MRI. Although they are costly and accessible only at an imaging center (in patient or outpatient), they are standard of care to insure that there is no gross brain tumor or evidence of white matter infarct, typical after sub-clinical or mini-strokes have occurred. In one costly modality, functional MRI is conducted whereby a patient is given tasks to complete while they are lying in a MRI brain scanner and asked to participate in task-based maneuvers to understand which anatomical structures are active during which dynamic task. These diagnostic studies are costly and difficult to implement with satisfactory results due to the distractions of motion artifacts and noise. In routine clinical practice, they are not commonly conducted.

Cognition

There are many companies creating computerized cognitive assessments of a human subject from a neuropsychological perspective. Many of these are considered reliable and easily administered in a clinician's office. Some of the cognitive assessment tools in the market today are the CogState battery of tasks, the CNS Vital Signs, the ImPACT test and the CANTAB battery. However, these cognition assessment tools have limitations on their ability to accurately and objectively measure brain function.

Diagnostics for Multiple Sclerosis

There is currently no single diagnostic test that is proof-positive for multiple sclerosis ("MS"). There is a set of accepted criteria for MS diagnosis, but even this system is imperfect. Since diagnosing MS can be very difficult, it must be done by a neurologist who specializes in treating MS.

An accurate diagnosis is currently based on the patient's medical history and neurological examination using tests of nervous system function. Much depends on the skill of the physician in asking the right questions to uncover information and to properly evaluate the signs and symptoms of a malfunctioning nervous system.

In addition to a thorough medical history and neurological examination, a variety of specialized procedures are helpful in accurately diagnosing MS. These include imaging techniques such as magnetic resonance imaging (MRI), spinal taps (examination of the cerebrospinal fluid that runs through the spinal column), and laboratory analysis of blood samples.

The precise image produced by MRI gives the neurologist clear evidence of scar tissue in the deep parts of the brain or spinal cord that is characteristic of MS. However, abnormal spots on the brain MRI can be caused by other conditions, so these images must be interpreted by the neurologist in light of all information about the patient. Similar lesions can be seen in elderly people or people with migraine headaches or high blood pressure. Confirming a diagnosis of MS and ruling out other possible causes requires expert interpretation of the MRI scan.

Performing a spinal tap to examine the cerebrospinal fluid might be helpful in diagnosing MS. An experienced MS neurologist may be able to confirm a suspected diagnosis of MS, particularly if the patient's history and physical examination suggest the presence of the disease. Abnormalities that might appear in the cerebrospinal fluid can be very helpful in establishing a diagnosis but, like other tests, spinal taps are not foolproof in diagnosing MS.

A blood test may help rule out conditions that imitate multiple sclerosis, but the presence of MS cannot be detected in the blood.

Treatments for Parkinson's Disease Levodopa Induced Dyskinesia ('PD-LID")

Amantadine

Although no drug is currently approved by the U.S. Food and Drug Administration ("FDA") for PD-LID, several small and medium studies (enrolling fewer than 70 patients) have demonstrated efficacy using Symmetrel (Amantadine). Amantadine was initially developed as an antiviral medication to treat influenza in the 1960s and was coincidentally discovered as a treatment for Parkinson's disease. Amantadine usually provides only mild relief, but is the only drug currently used to treat PD LID.

Amantadine HCI (ADS-5102, developed by Adamas Pharmaceuticals):

ADS-5102, which is amantadine in high dose controlled-release version (HCI), is designed to address many of the limitations of immediate-release amantadine. In Adamas' clinical studies, the amantadine plasma concentration achieved from the early morning through mid-day is approximately two-times that reached from immediate-release amantadine, providing symptomatic relief to patients as they engage in their daily activities. The lower concentrations of ADS-5102 occurred in the evening, which may potentially reduce the negative effect of amantadine on sleep. In addition, ADS-5102 capsules can be opened to sprinkle the contents on food for use by Parkinson's disease patients who have difficulty swallowing due to their illness.

In the Phase 2/3 clinical study (the EASED study), ADS-5102 met its primary endpoint and several key secondary endpoints. Results from the EASED study were presented at the 17th International Congress of Parkinson's Disease and Movement Disorders and at the 9th World Parkinson's Congress. Adamas intends to initiate a Phase 3 registration trial of ADS-5102 in PD LID. If the Phase 3 registration trial of ADS-5102 is successful, Adamas plans to submit a New Drug Application (NDA) to the US Food and Drug Administration (FDA) for ADS-5102 in the first half of 2016.

Mavoglurant (AFQ056) (developed byNovartis):

Mavoglurant (AFQ056) is an antagonist of the glutamate receptor mGluR5 which was developed by Novartis (NVS) for several CNS indications, including PD-LID. In a 31 patient Phase 2 trial in patients with moderate-to-severe PD-LID, 15 patients were randomized to 25-150 mg mavoglurant twice daily and 16 patients were randomized to placebo. Patients in the active drug group experienced a significant reduction in symptoms as measured by the Lang-Fahn Activities in Daily living scale without negative impact on the effectiveness of the anti-Parkinson's efficacy of their ongoing dopaminergic therapy. Similar effects were seen in the second study, which examined the efficacy of mavoglurant in 28 patients with severe PD-LID and used the Modified Abnormal Movement Scale to measure efficacy. However, during 2013 and 2014, Novartis announced the results of its phase IIb/III studies on patients with fragile X syndrome (FXS) did not meet the primary endpoints, and in 2014, announced it will not continue the development of Mavoglurant.

Dipraglurant (in development by Addex Therapeutics):

Dipraglurant, an oral negative allosteric modulator (NAM) of the metabotropic glutamate receptor 5 (mGluR5) for the treatment of PD-LID was examined in a randomized, double blind, placebo controlled Phase 2a trial in 83 subjects with moderate-to-severe Parkinson's disease. Results show that dipraglurant was safe and well tolerated with the most important side effects being vertigo, blurred vision, and a drunk feeling but none of these was severe. Results on the modified AIMS scale showed statistically significant improvement on days 1 and 14, with clinically relevant reductions in the dipraglurant group on all three periods tested (days 1, 14, and 28). Addex has specifically been looking to out-license dipraglurant for the initiation of a Phase 2b program study since 2012.

Treatments for Adult ADHD

Adderall

Adderall is a psychostimulant pharmaceutical drug of the phenethylamine class used in the treatment of attention deficit hyperactivity disorder (ADHD) and narcolepsy. The medication is a mixture of amphetamine stereoisomer salts and inactive ingredients. By salt content, the active ingredients are 75% dextroamphetamine salts and 25% levoamphetamine salts. Adderall is available in immediate release and extended release formulations.

Methylphenidate

Methylphenidate is a psychostimulant drug and substituted phenethylamine approved for treatment of attention-deficit hyperactivity disorder (ADHD), postural orthostatic tachycardia syndrome and narcolepsy. It was first licensed by the U.S. Food and Drug Administration (FDA) in 1955 for treating what was then known as hyperactivity. Prescribed to patients beginning in 1960, the drug became heavily prescribed in the 1990s, when the diagnosis of ADHD itself became more widely accepted. Methylphenidate is sold as Concerta, Methylin, Ritalin, and Equasym XL

Dexmethylphenidate

Dexmethylphenidate, otherwise known as d-threo-methylphenidate (D-TMP), is the dextrorotatory enantiomer of methylphenidate. It is a norepinephrine-dopamine reuptake inhibitor (NDRI) and releasing agent and thus a psychostimulant, which affects the CNS. Dexmethylphenidate is sold as Focalin by Novartis, as Attenade by Celgene and as a generic drug by Teva, Mylan, and IntelliPharmaCeuticals.

Atomoxetine

Atomoxetine is a drug approved for the treatment of attention-deficit hyperactivity disorder (ADHD). It is a selective norepinephrine reuptake inhibitor (NRI). Atomoxetine is sold as Strattera.

Treatments for Retinitis Pigmentosa

The NT-501 (Renexus®) ECT implant system

The NT-501 (Renexus®) ECT implant system generates the neurotrophic cytokine CNTF for treating photoreceptor degeneration associated with retinitis pigmentosa (RP), macular telangiectasia (MacTel), and achromatopsia (ACHM). This product is being developed by Neurotech which has received orphan drug and Fast Track designation from the U.S. FDA for treatment of visual loss in RP.

Halorhodopsin gene therapy treatment

GenSight Biologics is developing a halorhodopsin gene therapy treatment of blindness based on the results of the work of Dr. Ernst Bamberg a member of GenSight Biologics SAB, using a haorhodopsin gene embedded into a specific AAV variant which has shown its capacity to transfer the gene only into cones. The potential treatment for RP is currently in preclinical development.

Treatments for Severe Burns

The current trend of severe burn wound care is focused on the emergence of various skin substitutes in the management of acute burn injury as well as post burn reconstructions. Skin substitutes have important roles in the treatment of deep dermal and full thickness wounds. At present, there is no ideal substitute in the market. Skin substitutes can be divided into two main classes, namely, biological and synthetic substitutes. The biological skin substitutes have a more intact extracellular matrix structure, while the synthetic skin substitutes can be synthesized on demand and can be modulated for specific purposes. Each class has its advantages and disadvantages. The biological skin substitutes may allow the construction of a more natural new dermis and allow excellent re-epithelialisation characteristics due to the presence of a basement membrane. Synthetic skin substitutes demonstrate the advantages of increase control over scaffold composition. The ultimate goal is to achieve an ideal skin substitute that provides an effective and scar-free wound healing.

Several companies have developed products for the treatment of severe burns. Among those companies are:

- Smith & Nephew Wound Management

- Genzyme Biosurgery

- Integra Life Sciences Corporation

- LifeCell Corporation/Kinetic Concepts

- Organogenesis Inc

- Intercytex

- Genzyme

- Advanced Biohealing/ Shire

- Cy Ttera/ NovoCell/ViaCyte

- Biomimetic Therapeutics Inc.

- RTI Biologics

Four of these companies, (Smith and Nephew, Genzyme, Organogenesis, Integra and Advanced Biohealing) have products that are FDA approved for use in burn patients.

MANUFACTURING

We do not have any in-house manufacturing capabilities. The Company intends to outsource the manufacturing of its products to third party contractors, with special capabilities to manufacture chemical drugs and biologic drug candidates for submission and clinical testing under FDA guidelines.

Distribution & Marketing

We intend to develop our product candidates through successive de-risking milestones towards regulatory approval and seek marketing approval of our product candidates or effect partnering transactions with biopharmaceutical companies seeking to strategically fortify pipelines and fund the costly later-stage clinical development required to achieve successful commercialization. We do not anticipate selling products directly into the marketplace, although we may do so depending on market conditions. Our focus is to strategically effect partnering transactions which will provide distribution and marketing capabilities to sell products into the marketplace.

Government Regulation

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. The FDA has very broad enforcement authority and failure to abide by applicable regulatory requirements can result in administrative or judicial sanctions being imposed on us, including warning letters, refusals of government contracts, clinical holds, civil penalties, injunctions, restitution, disgorgement of profits, recall or seizure of products, total or partial suspension of production or distribution, withdrawal of approval, refusal to approve pending applications, and criminal prosecution.

CLIA Approval Process for Diagnostics

The Company believes its diagnostic candidates will be initially be regulated as Laboratory Developed Tests (“LDTs”) under the Clinical Laboratory Improvement Amendments (“CLIA”), and thereafter the Company may seek to gain FDA approval for its diagnostic candidates as In-Vitro Diagnostics (“IVDs”).

Congress passed the Clinical Laboratory Improvement Amendments in 1988 to regulate development, evaluation, and use of LDTs. CLIA states that laboratories must demonstrate how well an LDT performs using certain performance standards. Laboratories that perform testing on human specimens for the diagnosis, prevention, or treatment of disease, or for the assessment of health, must comply with all applicable CLIA '88 regulations. These regulations, which were finalized in 2003, establish standards to help ensure the quality and accuracy of laboratory testing. While most common laboratory tests are commercial tests, manufactured and marketed to multiple laboratories, some new tests are developed, evaluated, and validated within one particular laboratory. These LDTs are used solely within that laboratory and are not distributed or sold to any other labs or health care facilities.

Because LDTs are not marketed to other labs or facilities, they do not require approval for marketing from the U.S. Food and Drug Administration (FDA) as do commercially developed and marketed tests. However, these types of tests must go through rigorous validation procedures and must meet several criteria before results can be used for decisions regarding patient care. These include demonstration of test accuracy, precision, sensitivity, and specificity.

FDA Approval Process for Therapeutic Products

We believe that our therapeutic products will be regulated by the FDA as drugs. No manufacturer may market a new drug until it has submitted a New Drug Application, or NDA, to the FDA, and the FDA has approved it. The steps required before the FDA may approve an NDA generally include:

- preclinical laboratory tests and animal tests conducted in compliance with FDA's good laboratory practice requirements;
- development, manufacture and testing of active pharmaceutical product and dosage forms suitable for human use in compliance with current good manufacturing practices, or GMP;

- the submission to the FDA of an investigational new drug application, or IND, for human clinical testing, which must become effective before human clinical trials may begin;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the product for its specific intended use(s);
- the submission to the FDA of a New Drug Application, or NDA; and
- FDA review and approval of the NDA.

Preclinical tests include laboratory evaluation of the product candidate, as well as animal studies to assess the potential safety and efficacy of the product candidate. The conduct of the pre-clinical tests must comply with federal regulations and requirements including good laboratory practices. We must submit the results of the preclinical tests, together with manufacturing information, analytical data and a proposed clinical trial protocol to the FDA as part of an IND, which must become effective before it may commence human clinical trials. The IND will automatically become effective 30 days after its receipt by the FDA, unless the FDA raises concerns or questions before that time about the conduct of the proposed trials. In such a case, we must work with the FDA to resolve any outstanding concerns before clinical trials can proceed. We cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such trials. The study protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board for approval. An institutional review board may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the institutional review board's requirements or may impose other conditions.

Clinical trials involve the administration of the product candidate to humans under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control. Clinical trials are typically conducted in three sequential phases, though the phases may overlap or be combined. In Phase 1, the initial introduction of the drug into healthy human subjects, the drug is usually tested for safety (adverse effects), dosage tolerance and pharmacologic action, as well as to understand how the drug is taken up by and distributed within the body. Phase 2 usually involves studies in a limited patient population (individuals with the disease under study) to:

- evaluate preliminarily the efficacy of the drug for specific, targeted conditions;
- determine dosage tolerance and appropriate dosage as well as other important information about how to design larger Phase 3 trials; and
- identify possible adverse effects and safety risks.

Phase 3 trials generally further evaluate clinical efficacy and test for safety within an expanded patient population. The conduct of the clinical trials is subject to extensive regulation, including compliance with good clinical practice regulations and guidance.

The FDA may order the temporary or permanent discontinuation of a clinical trial at any time or impose other sanctions if it believes that the clinical trial is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. We may also suspend clinical trials at any time on various grounds.

The results of the preclinical and clinical studies, together with other detailed information, including the manufacture and composition of the product candidate, are submitted to the FDA in the form of an NDA requesting approval to market the drug. FDA approval of the NDA is required before marketing of the product may begin in the U.S. If the NDA contains all pertinent information and data, the FDA will "file" the application and begin review. The FDA may "refuse to file" the NDA if it does not contain all pertinent information and data. In that case, the applicant may resubmit the NDA when it contains the missing information and data. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of new drug applications. Most such applications for non-priority drug products are reviewed within 10 months. The review process, however, may be extended by FDA requests for additional information, preclinical or clinical studies, clarification regarding information already provided in the submission, or submission of a risk evaluation and mitigation strategy. The FDA may refer an application to an advisory committee for review, evaluation and recommendation as to whether the application should be approved. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. Before approving an NDA, the FDA will typically inspect the facilities at which the product candidate is manufactured and will not approve the product candidate unless GMP compliance is satisfactory. FDA also typically inspects facilities responsible for performing animal testing, as well as clinical investigators who participate in clinical trials. The FDA may refuse to approve an NDA if applicable regulatory criteria are not satisfied, or may require additional testing or information. The FDA may also limit the indications for use and/or require post-marketing testing and surveillance to monitor the safety or efficacy of a product. Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

The testing and approval process requires substantial time, effort and financial resources, and our product candidates may not be approved on a timely basis, if at all. The time and expense required to perform the clinical testing necessary to obtain FDA approval for regulated products can frequently exceed the time and expense of the research and development initially required to create the product. The results of preclinical studies and initial clinical trials of our product candidates are not necessarily predictive of the results from large-scale clinical trials, and clinical trials may be subject to additional costs, delays or modifications due to a number of factors, including difficulty in obtaining enough patients, investigators or product candidate supply. If we fail to obtain, or experience delays in obtaining, regulatory approvals or in complying with requirements could adversely affect the commercialization of product candidates and our ability to receive product or royalty revenues.

Other Regulatory Requirements

After approval, drug products are subject to extensive continuing regulation by the FDA, which include company obligations to manufacture products in accordance with Good Manufacturing Practice, or GMP, maintain and provide to the FDA updated safety and efficacy information, report adverse experiences with the product, keep certain records and submit periodic reports, obtain FDA approval of certain manufacturing or labeling changes, and comply with FDA promotion and advertising requirements and restrictions. Failure to meet these obligations can result in various adverse consequences, both voluntary and FDA-imposed, including product recalls, withdrawal of approval, restrictions on marketing, and the imposition of civil fines and criminal penalties against the NDA holder. In addition, later discovery of previously unknown safety or efficacy issues may result in restrictions on the product, manufacturer or NDA holder.

Manufacturers of products are required to comply with applicable FDA manufacturing requirements contained in the FDA's GMP regulations. GMP regulations require among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation. The manufacturing facilities for our products must meet GMP requirements to the satisfaction of the FDA pursuant to a pre-approval inspection before it can use them to manufacture its products. Ours and any third-party manufacturers are also subject to periodic inspections of facilities by the FDA and other authorities, including procedures and operations used in the testing and manufacture of its products to assess its compliance with applicable regulations.

With respect to post-market product advertising and promotion, the FDA imposes a number of complex regulations on entities that advertise and promote pharmaceuticals, which include, among others, standards for direct-to-consumer advertising, promoting drugs for uses or in patient populations that are not described in the drug's approved labeling (known as "off-label use"), industry-sponsored scientific and educational activities, and promotional activities involving the internet. Failure to comply with FDA requirements can have negative consequences, including adverse publicity, enforcement letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties. Although physicians may prescribe legally available drugs for off-label uses, manufacturers may not market or promote such off-label uses.

Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs.

Adverse event reporting and submission of periodic reports is required following FDA approval of an NDA. The FDA also may require post-marketing testing, known as Phase 4 testing, risk minimization action plans and surveillance to monitor the effects of an approved product or place conditions on an approval that could restrict the distribution or use of the product.

Outside the United States, our ability to market a product is contingent upon receiving marketing authorization from the appropriate regulatory authorities. The requirements governing marketing authorization, pricing and reimbursement vary widely from jurisdiction to jurisdiction. At present, foreign marketing authorizations are applied for at a national level, although within the European Union registration procedures are available to companies wishing to market a product in more than one European Union member state.

We are also subject to various environmental, health and safety regulations including those governing laboratory procedures and the handling, use, storage, treatment, and disposal of hazardous materials. From time to time, and in the future, our operations may involve the use of hazardous materials.

INTELLECTUAL PROPERTY

We are able to protect our technology from unauthorized use by third parties only to the extent that it is covered by valid and enforceable patents or is effectively maintained as a trade secret or is protected by confidentiality agreements. Accordingly, patents or other proprietary rights are an essential element of our business.

Patents extend for varying periods according to the date of patent filing or grant and the legal term of patents in the various countries where patent protection is obtained. The actual protection afforded by a patent, which can vary from country to country, depends on the type of patent, the scope of its coverage and the availability of legal remedies in the country.

While trade secret protection is an essential element of our business and we take security measures to protect its proprietary information and trade secrets, we cannot give assurance that its unpatented proprietary technology will afford it significant commercial protection. We seek to protect its 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 the Company their interests in intellectual property arising from their work for us. All employees sign an agreement not to engage in any conflicting employment or activity during their employment and not to disclose or misuse confidential information. However, it is possible that these agreements may be breached or invalidated, and if so, there may not be an adequate corrective remedy available. Accordingly, we cannot ensure that employees, consultants or third parties will not breach the confidentiality provisions in its contracts, infringe or misappropriate its trade secrets and other proprietary rights or that measures we take to protect our proprietary rights will be adequate.

In the future, third parties may file claims asserting that our technologies or products infringe on their intellectual property. We cannot predict whether third parties will assert such claims against us or against the licensors of technology licensed to us, or whether those claims will harm our business. If we are forced to defend ourselves against such claims, whether they are with or without merit and whether they are resolved in favor of, or against, our licensors or ourselves, we may face costly litigation and the diversion of our management’s attention and resources. As a result of such disputes, we may have to develop costly non-infringing technology or enter into licensing agreements. These agreements, if necessary, may be unavailable on terms acceptable to us, or at all.

Employees

We have ten employees as of December 31, 2014. We also utilize outside consultants as needed to support our operations. The Company intends to expand the Company's management team and support staff over the next 12 months to meet the growing demands of developing the Company's business objectives.

Item 1A. Risk Factors

Risks Related to Our Product Candidates and Operations

We are largely dependent on the success of our lead product candidates, LymPro, Eltoprazine and MANF, and we may not be able to successfully commercialize these products.

We have incurred and will continue to incur significant costs relating to the development of our lead product candidates, LymPro, Eltoprazine and MANF. We have not obtained approval to commercialize LymPro, Eltoprazine and MANF in any jurisdiction and we may never be able to obtain approval or, if approvals are obtained, to commercialize LymPro, Eltoprazine and MANF successfully.

If we fail to successfully commercialize our products, we may be unable to generate sufficient revenue to sustain and grow our business, and our business, financial condition and results of operations will be adversely affected.

If we fail to obtain U.S. regulatory approval of LymPro, Eltoprazine, MANF or any of our other current or future product candidates, we will be unable to commercialize these potential products in the United States.

The development, testing, manufacturing and marketing of our product candidates are subject to extensive regulation by governmental authorities in the United States. In particular, the process of obtaining FDA approval is costly and time consuming, and the time required for such approval is uncertain. Our product candidates must undergo rigorous preclinical and clinical testing and an extensive regulatory approval process mandated by the FDA. Such regulatory review includes the determination of manufacturing capability and product performance. Generally, only a small percentage of pharmaceutical products are ultimately approved for commercial sale.

We can give no assurance that our current or future product candidates will be approved by the FDA or any other governmental body. In addition, there can be no assurance that all necessary approvals will be granted for future product candidates or that FDA review or actions will not involve delays caused by requests for additional information or testing that could adversely affect the time to market for and sale of our product candidates. Further failure to comply with applicable regulatory requirements can, among other things, result in the suspension of regulatory approval as well as possible civil and criminal sanctions.

Our proprietary rights may not adequately protect our intellectual property and product candidates and if we cannot obtain adequate protection of our intellectual property and product candidates, we may not be able to successfully market our product candidates.

Our commercial success will depend in part on obtaining and maintaining intellectual property protection for our technologies and product candidates. We will only be able to protect our technologies and product candidates from unauthorized use by third parties to the extent that valid and enforceable patents cover them, or those other market exclusionary rights apply.

While we have issued enforceable patents covering our product candidates, the patent positions of life sciences companies, like ours, can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in such companies' patents has emerged to date in the United States. The general patent environment outside the United States also involves significant uncertainty. Accordingly, we cannot predict the breadth of claims that may be allowed or that the scope of these patent rights would provide a sufficient degree of future protection that would permit us to gain or keep our competitive advantage with respect to these products and technology.

Our issued patents may be subject to challenge and possibly invalidated by third parties. Changes in either the patent laws or in the interpretations of patent laws in the United States or other countries may diminish the market

exclusionary ability of our intellectual property.

In addition, others may independently develop similar or alternative compounds and technologies that may be outside the scope of our intellectual property. Should third parties obtain patent rights to similar compounds or radiolabeling technology, this may have an adverse effect on our business.

To the extent that consultants or key employees apply technological information independently developed by them or by others to our product candidates, disputes may arise as to the proprietary rights of the information, which may not be resolved in our favor. Consultants and key employees that work with our confidential and proprietary technologies are required to assign all intellectual property rights in their discoveries to us. However, these consultants or key employees may terminate their relationship with us, and we cannot preclude them indefinitely from dealing with our competitors. If our trade secrets become known to competitors with greater experience and financial resources, the competitors may copy or use our trade secrets and other proprietary information in the advancement of their products, methods or technologies. If we were to prosecute a claim that a third party had illegally obtained and was using our trade secrets, it would be expensive and time consuming and the outcome would be unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets than courts in the United States. Moreover, if our competitors independently develop equivalent knowledge, we would lack any contractual claim to this information, and our business could be harmed.

If our product candidates, including LymPro, Eltoprazine, MANF, do not gain market acceptance among physicians, patients and the medical community, we will be unable to generate significant revenue, if any.

The products that we develop may not achieve market acceptance among physicians, patients, third-party payers and others in the medical community. If we, or any of our partners, receive the regulatory approvals necessary for commercialization, the degree of market acceptance will depend upon a number of factors, including:

- limited indications of regulatory approvals;
- the establishment and demonstration in the medical community of the clinical efficacy and safety of our product candidates and their potential advantages over existing diagnostic compounds;
- the prevalence and severity of any side effects;
- our ability to offer our product candidates at an acceptable price;
- the relative convenience and ease of administration of our products;
- the strength of marketing and distribution support; and
- sufficient third-party coverage or reimbursement.

The market may not accept LymPro, Eltoprazine or MANF based products based on any number of the above factors. The market may choose to continue utilizing the existing products for any number of reasons, including familiarity with or pricing of these existing products. The failure of any of our product candidates to gain market acceptance could impair our ability to generate revenue, which could have a material adverse effect on our future business and prevent us from obtaining the necessary partnerships to further our business strategy.

Risks Associated with Our Financial Condition

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern, which may hinder our ability to obtain future financing.

Our consolidated financial statements as of December 31, 2014 were prepared under the assumption that we will continue as a going concern for the next twelve months. Our independent registered public accounting firm has issued a report that included an explanatory paragraph referring to our projected future losses along with recurring losses from operations and expressing substantial doubt in our ability to continue as a going concern without additional capital becoming available. Our ability to continue as a going concern is dependent upon our ability to obtain additional equity or debt financing, attain further operating efficiencies, reduce expenditures, and, ultimately, to generate revenue. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

We are at an early stage of development as a company and currently have no source of revenue and may never become profitable.

We are a development stage biopharmaceutical company. Currently, we have no products approved for commercial sale and, to date, we have not generated any revenue. Our ability to generate revenue depends heavily on:

- demonstration in future clinical trials that our product candidate, MANF for the treatment of PD is safe and effective;
- our ability to seek and obtain regulatory approvals, including with respect to the indications we are seeking;
- successful manufacture and commercialization of our product candidates; and
- market acceptance of our products.

All of our existing product candidates are in various stages of development and will require extensive additional preclinical and clinical evaluation, regulatory review and approval, significant marketing efforts and substantial investment before they could provide us with any revenue. As a result, if we do not successfully develop, achieve regulatory approval and commercialize LymPro, Eltoprazine and/or MANF, we will be unable to generate any revenue for many years, if at all. We do not anticipate that we will generate revenue for several years, at the earliest, or that we will achieve profitability for at least several years after generating material revenue, if at all. If we are unable to generate revenue, we will not become profitable, and we may be unable to continue our operations.

We do not have any products that are approved for commercial sale and therefore do not expect to generate any revenues from product sales in the foreseeable future, if ever.

We currently do not have any products that are approved for commercial sale. To date, we have funded our operations primarily from grants and sales of our securities. We have not received, and do not expect to receive for at least the next several years in the case of Eltoprazine and MANF and until the first half of 2015 in the case of LymPro, if at all, any revenues from the commercialization of our product candidates. To obtain revenues from sales of our product candidates, we must succeed, either alone or with third parties, in developing, obtaining regulatory approval for, manufacturing and marketing drugs with commercial potential. We may never succeed in these activities, and may not generate sufficient revenues to continue our business operations or achieve profitability.

We have incurred significant losses since inception and anticipate that we will incur continued losses for the foreseeable future.

As of December 31, 2014 we had an accumulated deficit of approximately 55 million. We have incurred significant losses since inception. We expect to incur significant and increasing operating losses for the next several years as we expand our research and development, advance product candidates into clinical development, complete clinical trials, seek regulatory approval and, if we receive FDA approval, commercialize our products. Because of the numerous risks and uncertainties associated with product development efforts, we are unable to predict the extent of any future losses or when we will become profitable, if at all. If we are unable to achieve and then maintain profitability, the market value of our common stock will likely decline.

We will need to raise substantial additional capital to fund our operations, and our failure to obtain funding when needed, may force us to delay, reduce or eliminate certain product development programs.

We expect to continue to spend substantial amounts to:

- continue development of our product candidates;
- finance our general and administrative expenses;
- license or acquire additional technologies;
- manufacture product for clinical trials;
- launch and commercialize our product candidates, if any such product candidates receive regulatory approval; and
- develop and implement commercial manufacturing, sales, marketing and distribution capabilities.

We will be required to raise additional capital to complete the development and commercialization of our product candidates and to continue to fund operations at the current cash expenditure levels. Our future funding requirements will depend on many factors, including, but not limited to:

- the rate of progress and cost of our clinical trials and other development activities;
- any future decisions we may make about the scope and prioritization of the programs we pursue;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- the costs of manufacturing product;
- the costs and timing of regulatory approval;
- the costs of establishing sales, marketing and distribution capabilities;
- the effect of competing technological and market developments;
- the terms and timing of any collaborative, licensing and other arrangements that we may establish; and
- general market conditions for offerings from biopharmaceutical companies.

Worldwide economic conditions and the international equity and credit markets have recently significantly deteriorated and may remain depressed for the foreseeable future. These developments could make it more difficult for us to obtain additional equity or credit financing, when needed.

We cannot be certain that funding will be available on acceptable terms, or at all. To the extent that we raise additional funds by issuing equity securities, our stockholders may experience significant dilution. Any debt financing, if available, may involve restrictive covenants that impact our ability to conduct our business. If we are unable to raise additional capital when required or on acceptable terms, we may have to significantly delay, scale back or discontinue the development and/or commercialization of one or more of our product candidates. We also may be required to:

- seek collaborators for our product candidates at an earlier stage than otherwise would be desirable and on terms that are less favorable than might otherwise be available; and/or
- relinquish license or otherwise dispose of rights to technologies, product candidates or products that we would otherwise seek to develop or commercialize ourselves on unfavorable terms. if we are unable to fund our operations, we may be forced to discontinue and wind down our business.

We may require additional financing to sustain our operations and without it we may not be able to continue operations.

At December 31, 2014, we had a working capital deficit of $5,900,000. We have never had positive operating cash flow. For the year ended December 31, 2014, we incurred an operating cash flow deficit of $11,331,000. We do not currently have sufficient financial resources to fund our operations or those of our subsidiaries. Therefore, we need additional funds to continue these operations.

We may direct Lincoln Park to purchase up to an additional $17,326,000 worth of shares of our common stock under our agreement generally in amounts up to 1,000,000 shares of our common stock on any such business day, which amounts may be increased to up to 2,500,000, provided the closing price of our common stock exceeds a certain threshold with a maximum limit of up to $500,000 worth of our common stock on any single business day, plus an additional "accelerated amount" under certain circumstances. However, Lincoln Park shall not purchase any shares of our common stock on any business day that the closing sale price of our common stock is less than $0.04 per share, subject to adjustment as set forth in the Purchase Agreement. Assuming a purchase price of $0.0822 per share (the closing sale price of the common stock on December 31, 2014) and the purchase by Lincoln Park of the full 76,500,000 purchase shares under the purchase agreement, proceeds to us would only be $6,288,300. As of March 25, 2015, the Company had received $5,441,381 from Lincoln Park in consideration for the issuance of an aggregate of 63,486,921 Company common shares, of which 952,249 shares were for commitment fees.

The extent we rely on Lincoln Park as a source of funding will depend on a number of factors including, the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. If obtaining sufficient funding from Lincoln Park were to prove unavailable or prohibitively dilutive, we will need to secure another source of funding in order to satisfy our working capital needs. Even if we sell all $20,000,000 under the Purchase Agreement to Lincoln Park, we will need additional capital to fully implement our business, operating and development plans. Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could be a material adverse effect on our business, operating results, financial condition and prospects.

Risks Associated with Management

If we are unable to hire and retain key personnel, we may not be able to implement our business plan.

Due to the specified nature of our business, having certain key personnel is essential to the development and marketing of the products we plan to sell and thus to the entire business itself. Consequently, the loss of any of those individuals may have a substantial effect on our future success or failure. We may have to recruit qualified personnel with competitive compensation packages, equity participation, and other benefits that may affect the working capital available for our operations. Management may have to seek to obtain outside independent professionals to assist them in assessing the merits and risks of any business proposals as well as assisting in the development and operation of many company projects. No assurance can be given that we will be able to obtain such needed assistance on terms acceptable to us. Our failure to attract additional qualified employees or to retain the services of key personnel could have a material adverse effect on our operating results and financial condition.

Risks Related to Our Common Stock

Our stock price may be volatile.

The stock market, particularly in recent years, has experienced significant volatility particularly with respect to pharmaceutical, biotechnology and other life sciences company stocks. The volatility of pharmaceutical, biotechnology and other life sciences company stocks often does not relate to the operating performance of the companies represented by the stock. Factors that could cause this volatility in the market price of our common stock include:

- results from and any delays in our clinical trials;
- failure or delays in entering additional product candidates into clinical trials;
- failure or discontinuation of any of our research programs;
- research publications that are unfavorable;
- delays in establishing new strategic relationships;
- delays in the development or commercialization of our potential products;
- market conditions in the pharmaceutical and biotechnology sectors and issuance of new or changed securities analysts' reports or recommendations;
- actual and anticipated fluctuations in our financial and operating results;
- developments or disputes concerning our intellectual property or other proprietary rights;
- introduction of technological innovations or new commercial products by us or our competitors;
- issues in manufacturing our potential products;
- market acceptance of our potential products;
- third-party healthcare reimbursement policies;
- FDA or other domestic or foreign regulatory actions affecting us or our industry;
- litigation or public concern about the safety of our product candidates; and
- additions or departures of key personnel.

These and other external factors may cause the market price and demand for our common stock to fluctuate substantially, which may limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock. In the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert the time and attention of our management.

We have not and do not anticipate paying any dividends on our common stock.

We have paid no dividends on our common stock to date and it is not anticipated that any dividends will be paid to holders of our common stock in the foreseeable future. While our future dividend policy will be based on the operating results and capital needs of the business, it is currently anticipated that any earnings will be retained to finance our future expansion and for the implementation of our business plan. As an investor, you should take note of the fact that a lack of a dividend can further affect the market value of our stock, and could significantly affect the value of any investment in our Company.

If we fail to establish and maintain an effective system of internal control, we may not be able to report our financial results accurately or to prevent fraud. Any inability to report and file our financial results accurately and timely could harm our reputation and adversely impact the trading price of our common stock.

Effective internal control is necessary for us to provide reliable financial reports and prevent fraud. We have not performed an in-depth analysis to determine if historical un-discovered failures of internal controls exist, and may in the future discover areas of our internal control that need improvement. If we cannot provide reliable financial reports or prevent fraud, we may not be able to manage our business as effectively as we would if an effective control environment existed, and our business and reputation with investors may be harmed. As a result, our small size and any current internal control deficiencies may adversely affect our financial condition, results of operation and access to capital.

Our common stock is currently deemed a "penny stock," which makes it more difficult for our investors to sell their shares.

Our common stock is subject to the "penny stock" rules adopted under Section 15(g) of the Exchange Act. The penny stock rules generally apply to companies whose common stock is not listed on The Nasdaq Stock Market or other national securities exchange and trades at less than $5.00 per share, other than companies that have had average revenue of at least $6,000,000 for the last three years or that have tangible net worth of at least $5,000,000 ($2,000,000 if the company has been operating for three or more years). These rules require, among other things, that brokers who trade penny stock to persons other than "established customers" complete certain documentation, make suitability inquiries of investors and provide investors with certain information concerning trading in the security, including a risk disclosure document and quote information under certain circumstances. Many brokers have decided not to trade penny stocks because of the requirements of the penny stock rules and, as a result, the number of broker-dealers willing to act as market makers in such securities is limited. If we remain subject to the penny stock rules for any significant period, it could have an adverse effect on the market, if any, for our securities. If our securities are subject to the penny stock rules, investors will find it more difficult to dispose of our securities.

Offers or availability for sale of a substantial number of shares of our common stock may cause the price of our common stock to decline.

If our stockholders sell substantial amounts of our common stock in the public market upon the expiration of any statutory holding period, under Rule 144, or issued upon the exercise of outstanding options or warrants, it could create a circumstance commonly referred to as an "overhang" and in anticipation of which the market price of our common stock could fall. The existence of an overhang, whether or not sales have occurred or are occurring, also could make more difficult our ability to raise additional financing through the sale of equity or equity-related securities in the future at a time and price that we deem reasonable or appropriate.

Our certificate of incorporation allows for our board to create new series of preferred stock without further approval by our stockholders, which could adversely affect the rights of the holders of our common stock.

Our board of directors has the authority to fix and determine the relative rights and preferences of preferred stock and has designated 250,000 preferred shares as Series A Convertible Preferred Stock, 3,000,000 as Series B Convertible Preferred Stock, 750,000 as Series C Convertible Preferred Stock, 1,300 as Series D 8% Convertible Preferred Stock, and, 7,779 as Series E 12% Convertible Preferred Stock. Our board of directors also has the authority to issue additional shares of our preferred stock without further stockholder approval. As a result, our board of directors could authorize the issuance of a series of preferred stock that would grant to holders the preferred right to our assets upon liquidation, the right to receive dividend payments before dividends are distributed to the holders of common stock and the right to the redemption of the shares, together with a premium, prior to the redemption of our common stock. In addition, our board of directors could authorize the issuance of a series of preferred stock that has greater voting

power than our common stock or that is convertible into our common stock, which could decrease the relative voting power of our common stock or result in dilution to our existing stockholders.

The sale or issuance of our common stock to Lincoln Park may cause dilution and the sale of the shares of common stock acquired by Lincoln Park, or the perception that such sales may occur, could cause the price of our common stock to fall

On March 7, 2014, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has committed to purchase up to $20,000,000 of our common stock. Concurrently with the execution of the Purchase Agreement on March 7, 2014, we issued 4,000,000 shares of our common stock to Lincoln Park for a total purchase price of $400,000 in the Initial Purchase under the Purchase Agreement and 6,000,000 Initial Commitment Shares to Lincoln Park as a fee for its commitment to purchase additional shares of our common stock under the Purchase Agreement. The additional shares that may be sold pursuant to the Purchase Agreement may be sold by us to Lincoln Park at our discretion from time to time over a 30-month period commencing June 17, 2014.

Other than with respect to the Initial Purchase by Lincoln Park under the Purchase Agreement, the purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement will fluctuate based on the market price of our common stock. Depending on market liquidity at the time, sales of such shares may cause the market price of our common stock to fall.

We generally have the right to control the timing and amount of any sales of our shares to Lincoln Park, except that, pursuant to the terms of our agreements with Lincoln Park, we would be unable to sell shares to Lincoln Park if and when the closing sale price of our common stock is below $0.04 per share, subject to adjustment as set forth in the Purchase Agreement. Additional sales of our common stock, if any, to Lincoln Park will depend upon market conditions and other factors to be determined by us. As such, other than the Initial Purchase, Lincoln Park may ultimately purchase all, some or none of the shares of our common stock that may be sold pursuant to the Purchase Agreement and, after it has acquired shares, Lincoln Park may sell all, some or none of those shares. Therefore, sales to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

The Company leases its main office facility and laboratory space in two separate locations in San Francisco, California. Office space in San Francisco is leased through November 2016 and provides for a monthly rental payment of approximately $12,000, plus operating expenses, subject to annual adjustment, of approximately $9,000 per month. The other facility lease is on a month-to-month basis. Total rent expense for 2014 was approximately $150,000.

Item 3. Legal Proceedings.

The Company is not currently involved in any litigation that it believes could have a material adverse effect on its financial condition or results of operations.

Item 4. Mine Safety Disclosures.

Not applicable.

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PART II

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

The Company's common stock is currently quoted on the OTCQB ("OTCQB"). The OTCQB is a network of security dealers who buy and sell stock. The dealers are connected by a computer network that provides information on current "bids" and "asks", as well as volume information. The Company's common stock is quoted on the OTCQB under the symbol "AMBS".

The following table sets forth, for the calendar periods indicated the range of the high and low last reported of the Company's common stock, as reported by the OTCQB. The quotations represent inter-dealer prices without retail mark-ups, mark-downs or commissions, and may not necessarily represent actual transactions. The quotations may be rounded for presentation.

Period	High	Low
First Quarter 2014	$0.1230	$0.0646
Second Quarter 2014	$0.1209	$0.0670
Third Quarter 2014	$0.1935	$0.0860
Fourth Quarter 2014	$0.0930	$0.0726

Period	High	Low
First Quarter 2013	$0.1950	$0.0453
Second Quarter 2013	$0.0900	$0.0270
Third Quarter 2013	$0.0890	$0.0279
Fourth Quarter 2013	$0.0925	$0.0391

As of March 25, 2015, Amarantus had 1,010,944,785 shares of common stock outstanding held by 82 shareholders of record.

Transfer Agent

The Company's registrar and transfer agent is VStock Transfer, LLC, 18 Lafayette Place, Woodmere, NY 11598.

Dividend Policy

We have not previously paid any cash dividends on our Common Stock and do not anticipate or contemplate paying dividends on our Common Stock in the foreseeable future. We currently intend to utilize all available funds to develop our business. We can give no assurances that we will ever have excess funds available to pay dividends.

Recent Sales of Unregistered Securities

On October 1, 2014 the Company issued 866,218 shares of the Company's restricted common stock as consideration for a dividend payment

On October 16, 2014, the Company issued 166,667 shares of the Company's restricted common stock, as consideration for an extension on a note payable.

On October 24, 2014 the company issued 982,143 shares of the Company's restricted common stock as consideration for a services provided and Board of Director fees.

On November 7, 2014, the Company issued 37,500,000 shares of the Company's restricted common stock, as payment for acquisition of certain assets of Regenicin, Inc.

In addition the company issued shares in during the year including the following transactions:

- On January 1, 2014 the Company issued 2,000,000 shares of the Company's restricted common stock as consideration for services provided.
- On January 31, 2014 the Company issued 500,000 shares of the Company's restricted common stock as consideration for services provided.
- On May 8, 2014 the Company issued 1,500,000 shares of the Company's restricted common stock as consideration under the Asset Purchase Agreement for Memory Dx.
- On May 28, 2014 the Company issued 2,083,333 shares of the Company's restricted common stock as consideration for a services provided.

Unless otherwise stated, the sales of the above securities were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(a) (2) of the Securities Act (or Regulation D or Regulation S promulgated thereunder), or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions.

Equity Compensation Plan Information

The Company's Board of Directors and its stockholders approved the 2008 Stock Plan as amended (the "2008 Plan"). Under the 2008 Plan, the Board of Directors may grant up to 46,119,832 shares of incentive stock options, nonqualified stock options, or stock awards to eligible persons, including employees, nonemployees, members of the Board, consultants, and other independent advisors who provide services to the Company. In general, options are granted with an exercise price equal to the fair value of the underlying common stock on the date of the grant. Options generally have a contractual life of 10 years and vest over periods ranging from being fully vested as of the grant dates to four years.

On August 6, 2014, the Board of Directors adopted the 2014 Stock Plan (the "2014 Plan"), which was approved by the Company's stockholder at the Company's Annual Meeting on September 22, 2014. Under the 2014 Plan, the Company may grant up to 153,880,168 common shares in the form of incentive stock options, nonqualified stock options or stock awards to eligible persons, including employees, nonemployees, members of the Board of Directors, consultants, and other independent advisors who provide services to the Company. In general, options are granted with an exercise price equal to the fair value of the underlying common stock on the date of the grant. Options granted typically have a contractual life of 10 years and vest over periods ranging from being fully vested as of the grant date to four years.

Further, in July 2012, our Board of Directors adopted a new stock plan, the Management, Employee, Advisor and Director Preferred Stock Option Plan – 2012 Series B Convertible Preferred Stock Plan. The purposes of this Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to management, employees, advisors and directors and to promote the success of our business. Certain current and former management, employees, advisors and directors were awarded a total of 1,248,000 options to purchase Series B Preferred shares on July 15th, 2012, and an additional 1,200,000 options on November 4, 2012.

The following table shows information with respect these plans as of the fiscal year ended December 31, 2014:

Equity Compensation Plan Information (Common Stock)

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average Exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a) (c)
Equity compensation plans approved by security holders	30,196,127	$ 0.08	146,626,652
Equity compensation plans not approved by security holders	—	—	—
Total	30,196,127	$ 0.08	146, 626,652

Equity Compensation Plan Information (Preferred Stock)

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average Exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	—	—	—
Equity compensation plans not approved by security holders	2,487,500	$ 0.61	512,500
Total	2,487,500	$ 0.61	512,500

Item 6. Selected Financial Data

Not applicable.

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

Forward-Looking Statements

This Annual Report on Form 10-K (including the section regarding Management's Discussion and Analysis or Plan of Operation) contains forward-looking statements regarding our business, financial condition, results of operations and prospects. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not deemed to represent an all-inclusive means of identifying forward-looking statements as denoted in this Annual Report on Form 10-K. Additionally, statements concerning future matters are forward-looking statements.

Although forward-looking statements in this Annual Report on Form 10-K reflect the good faith judgment of our Management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include, without limitation, those specifically addressed under the heading "Risks Factors" below, as well as those discussed elsewhere in this Annual Report on Form 10-K. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K.

The following discussion should be read in conjunction with our consolidated financial statements and notes thereto included elsewhere herein.

Overview

We are a California-based biopharmaceutical company founded in January 2008. We own or have exclusive licenses or options to various product candidates in the biopharmaceutical and diagnostic areas of the healthcare industry. We are developing our diagnostic product candidates in the field of neurology, and our therapeutic product candidates in the areas of neurology, psychiatry, ophthalmology and regenerative medicine. Our business model is to develop our product candidates through various de-risking milestones that we believe will be accretive to shareholder value, and will position them to be strategically partnered with pharmaceutical companies, diagnostic companies and/or other stakeholders in order to more efficiently achieve regulatory approval and commercialization.

Principal Products in Development

Our focus is currently in the areas of diagnostic, therapeutics, and drug discovery. During 2014, we had the following products at various stages of development:

Area and candidate	Application	Status
Diagnostics:		
LymPro Test ®	Diagnostic blood test for Alzheimer’s disease	Available for Investigational Use Only in pharmaceutical therapeutic clinical development programs
Therapeutics:		
Eltoprazine	· Parkinson's disease levodopa-induced dyskinesia (“PD LID”)	Phase 2a trial completed; Phase 2b program trial design FDA review completed; IND underway

	· Adult Attention Deficit Hyperactivity Disorder (“Adult ADHD”)	Pre-clinical
MANF	Retinitis pigmentosa (RP)	Orphan drug designation granted by FDA
Drug discovery		
PhenoGuard™	Drug discovery platform for discovery of other neurrotrophic factors	88 cell lines available

In addition to development and clinical areas for the above candidates, our efforts during 2014, and continuing into 2015, have been to license or acquire rights to intellectual properties and in-process research and development to advance development in these candidates, as well as other candidates in the areas of neurology, psychiatry, ophthalmology and regenerative medicine. We also entered into various sponsored research amongst these areas.

Critical Accounting Policies

Principles of Consolidation - The Consolidated Financial Statements include the accounts of Amarantus Bioscience Holdings, Inc. and its subsidiaries. All significant intercompany accounts and transactions have been eliminated.

Use of Estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of expenses during the reporting period. Significant estimates include the fair value of derivatives, the fair value of stock-based compensation and warrants, the carrying value of intangible assets (patents and licenses), valuation allowance against deferred tax assets, and related disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Certain Significant Risks and Uncertainties - We participate in a global, dynamic, and highly competitive industry and believes that changes in any of the following areas could have a material adverse effect on the Company's future financial position, results of operations, or cash flows: ability to obtain future financing; advances and trends in new technologies and industry standards; regulatory approval and market acceptance of the Company's products; development of the necessary manufacturing capabilities and the Company's ability to obtain adequate resources of necessary materials; development of sales channels; certain strategic relationships; litigation or claims against the Company based on intellectual property, patent, product, regulatory, or other factors; and the Company's ability to attract and retain employees and other resources necessary to support its growth.

Intangible Assets - Intangible assets or certain rights to use certain intangible assets in our research and development activities are capitalized as assets in cases where we have determined that those assets have an identifiable alternative future use in accordance with GAAP. In certain cases, we may conclude certain assets have indeterminate useful lives in which case they are considered to have indefinite lives. We have determined that the useful lives of assets which can be reasonable estimated and amortized to expense over such useful lives range between 9.5 years and 18.5 years.

Research and Development Expenditures - Research and development expenses consist of personnel costs, including salaries, benefits and stock-based compensation, materials and supplies, licenses and fees, and overhead allocations consisting of various administrative and facilities related costs. Research and development activities consist primarily of three main categories: research, clinical development, and biotechnology development. Research costs typically consist of preclinical and toxicology costs. Clinical development costs include costs for clinical studies and trials. Biotechnology development costs consist of costs incurred for product formulation and analysis. Research and development costs are charged to expense when incurred.

Fair Value of Financial Instruments - The fair value of certain of financial instruments, including cash and cash equivalents, accrued compensation, and other accrued liabilities, approximate cost because of their short maturities. The fair value of certain financial assets and liabilities are measured on a recurring basis. A fair value hierarchy is used to rank the quality and reliability of the information used to determine fair values. Financial assets and liabilities carried at fair value which is not equivalent to cost will be classified and disclosed in one of the following three categories:

- Level 1- Quoted prices (unadjusted) in active markets for identical assets and liabilities.

- Level 2 - Inputs other than Level 1 that are observable, either directly or indirectly, such as unadjusted quoted prices for similar assets and liabilities, unadjusted quoted prices in the markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

- Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Stock-Based Compensation - Stock-based compensation is measured at the grant date based on the fair value of the award. The fair value of the award that is ultimately expected to vest is recognized as expense on a straight-line basis over the requisite service period, which is generally the vesting period. The expense recognized for the portion of the award that is expected to vest has been reduced by an estimated forfeiture rate. The forfeiture rate is determined at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Grant-date fair value is determined using the Black-Scholes option pricing model, which requires the use of the following assumptions:

Expected Term — The expected term represents the period that options are expected to be outstanding based on the simplified method, which is the half-life from vesting to the end of its contractual term.

Expected Volatility — Stock price volatility is computed over expected terms based on the historical common stock trading price for our stock.

Risk-Free Interest Rate — The risk-free interest rate is estimated based upon the implied yield available on U.S. Treasury zero-coupon issues with an equivalent remaining term.

Expected Dividend — Cash dividends have never been declared or paid on common shares and there are no plans to do so in the foreseeable future such that the expected dividend yield is assumed to be zero.

The fair value of stock options granted to nonemployees is recognized as stock-based compensation expense over the period in which the related services are received.

Preferred Stock — Preferred shares subject to mandatory redemption are classified as liability instruments and are measured at fair value. Conditionally redeemable preferred shares, which include preferred shares that feature redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company’s control, are classified as temporary equity until such time as the conditions are removed or lapse.

Convertible Financial Instruments — We bifurcate conversion options from their host instruments and account for them as free standing derivative financial instruments if certain criteria are met. The criteria include circumstances in which (a) the economic characteristics and risks of the embedded derivative instrument are not clearly and closely related to the economic characteristics and risks of the host contract, (b) the hybrid instrument that embodies both the embedded derivative instrument and the host contract is not re-measured at fair value under otherwise applicable generally accepted accounting principles with changes in fair value reported in earnings as they occur and (c) a separate instrument with the same terms as the embedded derivative instrument would be considered a derivative instrument. An exception to this rule is when the host instrument is deemed to be conventional, as that term is described under applicable GAAP.

When it has been determined that the embedded conversion options should not be bifurcated from their host instruments, discounts are recorded for the intrinsic value of conversion options embedded in debt instruments based upon the differences between the fair value of the underlying common stock at the commitment date of the debt transaction and the effective conversion price embedded in the debt. Deemed dividends are also recorded, when present, for the intrinsic value of conversion options embedded in preferred shares based upon the differences between the fair value of the underlying common stock at the commitment date of the transaction and the effective conversion price embedded in the preferred shares.

Common Stock Purchase Warrants and Derivative Financial Instruments — Common stock purchase warrants and other derivative financial instruments are classified as equity if the contracts (1) require physical settlement or net-share settlement or (2) give the issuer a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). Contracts which (1) require net-cash settlement (including a requirement to net cash settle the contract if an event occurs and if that event is outside the control of the Company), (2) give the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement), or (3) that contain reset provisions that do not qualify for the scope exception, are classified as assets or liabilities. Classification of its common stock purchase warrants and other derivatives is assessed at each reporting date to determine whether a change in classification between assets and liabilities is required.

Debt Discounts — Debt discounts under these arrangements are amortized to interest expense using the interest method over the earlier of the term of the related debt or their earliest date of redemption.

Income Taxes — Income taxes are accounted for using the liability method whereby deferred tax asset and liability account balances are determined based on differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. A valuation allowance is provided, if necessary, to reduce deferred tax assets to their estimated realizable value.

All available positive and negative evidence is considered, including operating results, ongoing tax planning, and forecasts of future taxable income on a jurisdiction-by-jurisdiction basis is evaluated regarding the ability to recover deferred income tax assets. In the event we determine we will be able to realize any deferred income tax assets in the future in excess of their net recorded amount, we would adjust the valuation allowance which would reduce our provision for income taxes. Conversely, in the event that all or part of net deferred tax assets are determined not to be realizable in the future, an adjustment to the valuation allowance would be charged to earnings in the period such determination is made.

The effect of uncertain income tax positions is recognized only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

Interest and penalties related to uncertain tax positions are recorded in the provision for income tax expense on the consolidated statements of operations.

Recently Issued Accounting Pronouncements

Accounting Standards Update (ASU) No. 2014-10, *Development Stage Entities (Topic 915): Elimination of Certain Financial Reporting Requirements, Including an Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation* removes all incremental financial reporting requirements for development stage entities, including the removal of reporting of the cumulative results of operations and cash flows for the period from inception to the end of the current period. The ASU is effective for the first annual period beginning after December 15, 2014. Early adoption is permitted, and we adopted this change during 2014.

ASU No. 2014-12*, Compensation – stock* requires that a performance target which affects vesting and could be achieved after the requisite service period should be treated as a performance condition that affects vesting, rather than a condition that affects the grant-date fair value. The ASU is effective for the first annual period beginning after December 15, 2015 and interim periods within those years for all entities. Early adoption is permitted. We are evaluating the effect of this FASB issuance, if any, on our financial statements. We have decided not to early adopt at this time.

ASU No. 2014-15, *Presentation of Financial Statements— Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern.* The amendments in this ASU are effective for the first annual period ending after December 15, 2016 and interim periods within those years for all entities. Early adoption is permitted. We are evaluating the effect of this FASB issuance, if any, on our financial statements. We have decided not to early adopt at this time.

ASU 2014-16, *Derivatives and Hedging (Topic 815): Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share Is More Akin to Debt or to Equity.* The amendments in this ASU are effective for the first annual period ending after December 15, 2015 and interim periods within those years. Early adoption is permitted. We are evaluating the effect of this FASB issuance, if any, on our financial statements. We have decided not to early adopt at this time.

Results of Operations

Comparison of Years Ended December 31, 2014 and 2013

(in thousands, except share and per share data)

Net Sales — We did not recognize any revenue in either of the two years ended December 31, 2014 or 2013.

We do not expect to receive any revenues from the commercialization of our product candidates for at least the next several years in the case of Eltoprazine and MANF and until the second half of 2015 in the case of LymPro. To obtain revenues from sales of our product candidates, we must succeed, either alone or with third parties, in developing, obtaining regulatory approval for, manufacturing and marketing drugs with commercial potential.

The following table summarizes our research and development expenses for the years ended December 31, 2014 and 2013:

	2014	2013	$ Change	% Change
Research and development	$13,762	$2,089	$ 11,673	559 %

During the year ended December 31, 2014, our research and development costs consisted primarily of start-up clinical expenses. Research and development expense increased in 2014 as compared to 2013 primarily due to expensed in-process research and development associated with intellectual property and technology acquired in the Regenicin transaction, and to a lesser extent, increases in consulting, stock based compensation, and preclinical research study costs.

The following table summarizes our general and administrative expenses for the years ended December 31, 2014 and 2013:

	2014	2013	$ Change	% Change
General and administrative	$7,592	$3,622	$ 3,970	110 %

General and administrative expenses increased primarily due to increased patent related legal costs, investor and public relations services, other outside services and stock based compensation.

The following table summarizes our other income (expense) for the years ended December 31, 2014 and 2013:

	2014	2013	$ Change	% Change
Interest expense	$(813)	$(2,631)	$1,818	69%
Loss on issuance of common stock	$(260)	$(352)	$92	26%
Loss on issuance of debt	$—	$(6,709)	$6,709	100%
Loss on extinguishment of convertible debt	(1,250)	—	(1,250)	(100)%
Loss on issuance of warrants	$(3,867)	$—	$(3,867)	(100)%
Other expense	$(50)	$—	$(50)	(100)%
Change in fair value of warrants and derivative liabilities	$317	$271	$46	17%
Total other expense	$(5,923)	$(9,421)	$3,498	37%
Net loss attributable to common stockholders	$(28,152)	$(15,170)	$12,982	86%
Basic and diluted net loss per common share	$(0.04)	$(0.03)	$.01	33%

The decline in interest expense was attributable to the retirement of debt, primarily during the first half of 2014 and primarily retired through conversion to common stock.

The decline in loss incurred upon the issuance of common stock was attributable to the reduction of stock issued for services from in 2014 from 2013.

We incurred a loss on conversion of debt of $1,250 for the year ended December 31, 2014 as a result of retiring debt, primarily our 8% senior convertible debentures, through conversion to common stock. The loss occurred as a result of the fair value of our stock on the date of conversion being above the fair value of the debt at conversion.

We incurred a loss on the issuance of warrants of $3,867 for the year ended December 31, 2014 as a result of our warrant exchange program in which existing warrant holders could receive new warrants if they exercised existing warrants. The fair value of the new warrants was determined to be greater than the fair value of the exchanged warrants, resulting in a loss on issuance.

We incurred a loss on investment of $50 in 2014 and no loss was recorded in 2013.

The change in the fair value of warrants and derivative liabilities was minimal, primarily to lower balances of the warrant and derivative liabilities in 2014 as compared to 2013. The derivative liability was associated with the 8% senior convertible debentures, which were retired primarily in the first quarter of 2014. At December 31, 2014, the balance of the warrant and derivative liability was $0.

Liquidity and Capital Resources

(in thousands except per share and per share data)

As of December 31, 2014, the Company had total current assets of $412 consisting of $214 in cash and cash equivalents and $198 in prepaid expenses and other current assets. As of December 31, 2014, the Company had current liabilities in the amount of $6,329, consisting of:

Accounts payable	$5,903
Accrued liabilities	$149

Accrued interest	$25
Related party liabilities and accrued interest	$252

The table below sets forth selected cash flow data for the periods presented

	2014	2013
Net cash used in operating activities	$(11,331)	$(3,473)
Net cash used in investing activities	(1,535)	(70)
Net cash provided by financing activities	12,047	4,419
Net (decrease) increase in cash and cash equivalents	$(819)	$876

Since inception, the Company has financed cash flow requirements primarily through the issuance of stock or debt.

During 2014, we augmented our ability to raise operating cash through two significant equity agreements:

Lincoln Park Capital

In March 2014, we entered into an agreement with Lincoln Park Capital Fund LLC (“LPC”) for an equity financing agreement. LPC is obligated to purchase up to $20,000 of the Company’s common stock from time to time over a 30 month period, in amounts up to $500 per sale as directed by the Company and subject to certain requirements, restrictions and limitations. There are no upper limits to the price LPC may pay to purchase our common stock and the purchase price is based on prevailing market prices of our stock at the time of sales without any fixed discount, We control the timing and amount of any sales to LPC In addition, we may direct LPC to purchase additional amounts as accelerated purchases the closing price of our stock is not below certain threshold price. We filed a registration statement with the SEC covering the shares issuable to LPC. As of December 31, 3104, we had approximately $17,300 available to us under the agreement.

Through March 25, 2015, the Company has sold an additional 37,445,801 shares of common stock for gross proceeds of $2,767 under its agreement with LPC.

Series E Convertible Preferred Stock

On November 7, 2014, the Company entered into securities purchase agreements pursuant to which the Company issued 4,500 shares of Series E Convertible Preferred Stock (”Series E Preferred Stock”) which has a stated value of $1,000 per share of Series E Preferred Stock and pays quarterly 12% cumulative dividends per annum. Dividends are payable by the Company in cash or at the Company’s option, in shares of common stock if certain conditions are met. Series E shares are entitled to three years of dividends even if converted up to three years following the issuance date. Each share of Series E Preferred Stock is convertible into shares of common stock by dividing the stated value per share by the then effective conversion price. The conversion price for the Series E is initially $0.08 per share, subject to adjustment under certain conditions, but in no event prior to six months from issuance. Series E Preferred stockholders have the right to vote on all matters submitted to the Company’s shareholders and the Series E Preferred Stock is entitled to such number of votes on an as-converted basis. Series E Preferred Stock also has a liquidation preference equal to the stated value and accrued and unpaid dividends.

Through March 31, 2015, the Company has sold a total of 7,779 shares of Series E for gross proceeds of $7,000.

The proceeds received by the Company through sales of common stock to LPC and sales of Series E convertible preferred stock were used for product development, commercialization, strategic acquisitions, and general corporate purposes.

The success of our business plan during the next 12 months and beyond is contingent upon us generating sufficient revenue to cover our costs of operations, or upon us obtaining additional financing. We believe our current capital resources are not sufficient to support our operations. We intend to continue our research efforts and to finance operations through debt and/or equity financings. We will seek additional debt and/or equity financing through private or public offerings or through a business combination or strategic partnership. There can be no assurance that such additional financing will be available to us on acceptable terms or at all. Similarly, there can be no assurance that we will be able to generate sufficient sales to cover the costs of our business operations.

Going Concern

Our financial statements have been prepared assuming that we will continue as a going concern which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. Because we believe our current capital resources are not sufficient to support our operations and there can be no assurance that we will be successful in obtaining additional financing on favorable terms, or at all there is substantial doubt about our ability to continue as a going concern. We will, however, seek additional debt and/or equity financing through private or public offerings or through a business combination or strategic partnership. Our financial statements do not include any adjustment relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should we become unable to continue as a going concern.

Off Balance Sheet Arrangements

There are no off-balance sheet arrangements.

Contractual Obligations

We have the following contractual obligations:

Lease Arrangements

Future noncancellable minimum lease payments for our facilities are:

2015	$146
2016	139
Total	$285

Sponsored Research Arrangements:

We entered into a number of sponsored research agreements during 2014, primarily, which require us to make future payments as follows:

2015	$352
2016	150
Total	$502

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Not applicable.

Item 8. Financial Statements and Supplementary Data.

The financial statements are included herein commencing on page F-1.

Index to Financial Statements Required by Article 8 of Regulation S-X:

Audited Financial Statements:

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Audit Committee of the
Board of Directors and Shareholders
of Amarantus Bioscience Holdings, Inc.

We have audited the accompanying consolidated balance sheets of Amarantus Bioscience Holdings, Inc. (the "Company") as of December 31, 2014 and 2013, and the related consolidated statements of operations, changes in stockholders' equity (deficit) and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit 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, as well as 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 Amarantus Bioscience Holdings, Inc., as of December 31, 2014 and 2013, and the results of their operations and their cash flows for each of the years then ended in conformity with accounting principles generally accepted in the United States of America.

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

/s/ Marcum LLP

New York, NY

April 3, 2015

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Amarantus Bioscience Holdings, Inc.

Consolidated Balance Sheets

(in thousands, except share and per share data)

	December 31, 2014	December 31, 2013
ASSETS		
Current assets:		
Cash and cash equivalents	$ 214	$ 1,033
Deferred funding fees, net	—	109
Prepaid expenses and other current assets	198	106
Total current assets	412	1,248
Restricted cash	204	—
Property and equipment, net	145	—
Intangible assets, net	1,497	611
Total assets	$ 2,258	$ 1,859
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 3,353	$ 972
Accounts payable - Regenicin	2,550	—
Related party liabilities and accrued interest	252	248
Accrued expenses	149	292
Accrued interest	25	112
8% senior convertible debentures, net of discount	—	932
Convertible promissory notes	—	124
Derivative liability	—	5,859
Total current liabilities	6,329	8,539
Total liabilities	6,329	8,539
Commitments and contingencies		
Series D convertible preferred stock, $1,000 stated value, 1,300 shares designated; 1,299.327 issued and outstanding as of December 31, 2013	—	839
Stockholders’ equity (deficit)		
Convertible preferred stock, $0.001 par value, 10,000,000 shares authorized:		
Series A, $0.001 par value, 250,000 shares designated, -0- shares issued and outstanding as of December 31, 2014 and December 31, 2013	—	—
Series B, $0.001 par value, 3,000,000 shares designated, -0- shares issued and outstanding as of December 31, 2014 and December 31, 2013	—	—
Series C, $0.001 par value, 750,000 shares designated, 750,000 shares issued and outstanding as of December 31, 2014 and December 31, 2013	1	1

Series D, $1,000 stated value; 1,300 shares designated; 1,299.327 issued and outstanding as of December 31, 2014; aggregate liquidation preference of $1,299 as of December 31, 2014	1,169	—
Series E, $1,000 stated value; 6,000 shares designated, 4,500 issued and outstanding as of December 31, 2014; aggregate liquidation preference of $4,500 as of December 31, 2014	4,050	—
Common stock, $0.001 par value, 2,000,000,000 and 1,000,000 shares authorized as of December 31, 2014 and December 31, 2013, respectively; 842,190,750 and 574,171,945 shares issued and outstanding at December 31, 2014 and December 31, 2013, respectively	842	574
Additional paid-in capital	45,050	18,938
Accumulated deficit	(55,183)	(27,032)
Total stockholders' equity (deficit)	(4,071)	(7,519)
Total liabilities and stockholders' equity (deficit)	$ 2,258	$ 1,859

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

Amarantus Bioscience Holdings, Inc.

Consolidated Statements of Operations

(in thousands, except share and per share data)

	Year Ended December 31,	
	2014	2013
Net sales	$—	$—
Operating expense:		
Research and development	13,762	2,089
General and administrative	7,592	3,622
Total operating expense	21,354	5,711
Loss from operations	(21,354)	(5,711)
Other income (expense):		
Interest expense	(813)	(2,631)
Loss on issuance of common stock	(260)	(352)
Loss on issuance of debt	—	(6,709)
Loss on extinguishment of convertible debt	(1,250)	—
Loss on issuance of warrants	(3,867)	—
Other expense	(50)	—
Change in fair value of warrants and derivative liabilities	317	271
Total other expense	(5,923)	(9,421)
Net loss	$(27,277)	$(15,132)
Preferred stock dividend	875	38
Net loss attributable to common stockholders	$(28,152)	$(15,170)
Basic and diluted net loss per common share	$(0.04)	$(0.03)
Basic and diluted weighted average common shares outstanding	788,933,978	450,931,510

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

Amarantus Bioscience Holdings, Inc.

Consolidated Statements of Stockholders' Equity (Deficit)

(in thousands, except share and per share data)

	Convertible Preferred Stock		Common Stock				
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
Balances as of January 1, 2013	250,000	$ —	342,516,931	$ 343	$ 7,991	$ (11,862)	$ (3,528)
Preferred stock - Series A converted to common	(250,000)	—	8,094,117	8	119	—	127
Preferred stock - Series C issued to officers as compensation	750,000	1	—	—	38	—	39
Common stock issued for services	—	—	21,199,822	21	839	—	860
Common stock issued to acquire intangible assets	—	—	2,000,000	2	77	—	79
Common stock issued in settlement of accounts payable	—	—	7,430,922	8	252	—	260
Common stock issued in settlement of notes payable	—	—	93,860,499	94	2,106	—	2,200
Common stock issued upon conversion of convertible promissory notes	—	—	98,455,794	98	1,461	—	1,559
Common stock issued for Series D convertible preferred stock dividend	—	—	413,860	—	12	(12)	—
Loss on issuance of common stock	—	—	—	—	352	—	352
Common stock issued upon exercise of common stock options	—	—	200,000	—	—	—	—
Debt discount written off - associated with convertible promissory notes	—	—	—	—	(250)	—	(250)
Beneficial conversion feature - debt discount - convertible promissory notes			—	—	226	—	226
Beneficial conversion feature - Series D Convertible Preferred stock			—	—	321	—	321

Relative fair value associated with senior secured convertible debentures issued with detachable warrants			—	—	1,939	—	1,939
Derivative liability reclassified upon conversion of convertible promissory notes			—	—	2,712	—	2,712
Series D convertible preferred stock 8% dividend accrued at period end			—	—	—	(26)	(26)
Stock-based compensation expense	—	—	—	—	744	—	744
Net loss	—	—	—	—	—	(15,132)	(15,132)
Balances as of December 31, 2013	750,000	1	574,171,945	574	18,939	(27,032)	(7,519)
Common stock issued for services	—	—	7,645,649	8	655	—	663
Common stock issued to acquire intangible assets	—	—	5,500,000	6	348	—	354
Common stock issued to acquire in-process research and development	—	—	37,500,000	38	2,962	—	3,000
Common stock issued in settlement of accounts payable	—	—	803,589	1	67	—	68
Common stock issued in private placement	—	—	30,041,120	30	3,044	—	3,074
Common stock issued in consideration of commitment fees for equity financing	—	—	6,468,001	6	510	—	516
Deferred commitment fee for equity financing reclassified upon stock issuance	—	—	—	—	(518)	—	(518)
Common stock issued upon conversion of 8% convertible debentures, including accrued interest	—	—	86,473,409	86	8,337	—	8,423
Common stock issued upon conversion of convertible promissory notes, including accrued interest	—	—	6,937,801	7	123	—	130
Common stock issued for extension of maturity of demand promissory note payable			267,779	—	20	—	20
Common stock issued for Series D convertible preferred stock dividend	—	—	3,464,872	3	100	(103)	—
Loss on issuance of common stock	—	—	—	—	260	—	260
Common stock issued upon exercise of common stock	—	—	82,916,585	83	4,892	—	4,975

warrants							
Deferred funding costs charged to equity upon termination of advisory agreement	—	—	—	—	(190)	—	(190)
Loss on issuance of warrants	—	—	—	—	3,867	—	3,867
Series E convertible preferred stock issued, net of issue costs of $43	3,944	3,550	—	—	(43)	—	3,507
Series E convertible preferred stock issued to retire demand promissory note	556	500	—	—	—	—	500
Series E convertible preferred stock deemed dividend from beneficial conversion feature	—	—	—	—	376	(376)	—
Series D convertible preferred stock deemed dividend from beneficial conversion feature		330				(330)	
Series D convertible preferred stock reclassified to stockholders' equity (deficit)	1,299	839	—	—		—	839
Series E convertible preferred stock dividend accrued at period end	—	—	—	—	—	(65)	(65)
Stock-based compensation expense	—	—	—	—	1,302	—	1,302
Net loss	—	—	—	—	—	(27,277)	(27,277)
Balances as of December 31, 2014	755,799	$ 5,220	842,190,750	$ 842	$ 45,050	$ (55,183)	$ (4,071)

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

Amarantus Bioscience Holdings, Inc.

Consolidated Statements of Cash Flows

(in thousands, except share and per share data)

	Year ended December 31,	
	2014	2013
Cash flows from operating activities		
Net loss	$ (27,277)	$ (15,132)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	35	—
Amortization of debt discount	582	1,768
Amortization of deferred financing fees	223	253
Amortization of intangibles	118	70
Common Stock issued for services	663	860
Common stock issued to acquire in-process research and development	3,000	—
Write-off of clinical trial materials	500	—
Impairment of investment	50	—
Loss on debt issuance	—	6,709
Loss on Common stock issuance	260	352
Loss on warrant issuance	3,867	—
Loss on extinguishment of convertible debt	1,250	—
Preferred stock Series C issued as compensation	—	39
Stock-based compensation expense	1,302	744
Non-cash interest expense	52	—
Change in fair value of warrants and derivative liabilities	(317)	(271)
Common stock issued at conversion of Series A preferred stock		127
		—
Changes in assets and liabilities		
Prepaid expenses and other current assets	(92)	368
Accounts payable	4,645	88
Accrued expenses and accrued interest	(195)	549
Related party liabilities	3	4
Net cash used in operating activities	(11,331)	(3,473)
Cash flows from investing activities		
Restricted cash	(204)	—
Investment	(50)	—
Acquisition of property and equipment	(181)	
Acquisition of other assets and intangible assets	(1,100)	(70)
Net cash used in investing activities	(1,535)	(70)
Cash flows from financing activities		
Proceeds from demand promissory notes	500	5,048

Repayment of demand and convertible notes, including accrued interest	(9)	(304)
Proceeds from issuance of common stock	3,074	—
Proceeds from issuance of convertible preferred stock	3,550	—
Proceeds from exercise of warrants	4,975	—
Costs of financings	(43)	(325)
Net cash provided by financing activities	12,047	4,419
Net (decrease) increase in cash and cash equivalents	(819)	876
Cash and cash equivalents, beginning of period	1,033	157
Cash and cash equivalents, end of period	$ 214	$ 1,033

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

Amarantus Bioscience Holdings, Inc.

Consolidated Statements of Cash Flows

(in thousands, except share and per share data)

	Year Ended December 31,	
	2014	2013
Supplemental schedule of non-cash activities:		
8% senior convertible debentures and accrued interest, net of unamortized debt discount and associated derivative liability converted to common stock	7,091	—
Relative fair value associated with 8% senior convertible debentures issued with detachable warrants	—	1,939
Beneficial conversion feature - Series D convertible preferred stock	—	321
Beneficial conversion feature - debt discount - convertible promissory notes	—	226
Convertible promissory notes converted to common stock and associated reclassification of derivative liability	130	2,712
Debt discount written off - associated with convertible promissory notes	—	(250)
Debt discount associated with convertible promissory notes - derivative liability	—	813
Series D convertible preferred stock issued in settlement of accounts payable	—	1,169
Convertible promissory notes issued in settlement of accounts payable and accrued liabilities	—	123
Convertible notes payable issued in settlement of accounts payable	—	161
Common stock issued in consideration of commitment fees	516	—
Deferred commitment fee for equity financing reclassified upon stock issuance	(516)	—
Common stock issued to acquire intangible assets	354	79
Common stock issued in settlement of accounts payable and accrued expenses	68	260
Series E Preferred stock issued in settlement of demand promissory notes	500	2,200
Stock issued for convertible debt	—	1,559
Common stock issued for preferred stock dividend	104	—
Preferred stock dividend accrued at end of period	(65)	(26)
Supplemental cash flow information:		
Interest paid	59	61

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

Amarantus Bioscience Holdings, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

1. General

Amarantus Bioscience Holdings, Inc. (the "Company"), is a biopharmaceutical company focused on the development of diagnostics and therapeutics to treat human disease, to date primarily in for Alzheimer's disease, Parkinson's disease and ophthalmological disorders. Through December 31, 2014, the Company has been primarily engaged in acquiring and licensing intellectual property and proprietary technologies, research and development, and raising capital to fund its operations.

2. liquidity and Going Concern

The Company's activities since inception have consisted principally of acquiring product and technology rights, raising capital, and performing research and development. Successful completion of the Company's development programs and, ultimately, the attainment of profitable operations are dependent on future events, including, among other things, its ability to access potential markets; secure financing, develop a customer base; attract, retain and motivate qualified personnel; and develop strategic alliances. From inception, the Company has been funded by a combination of equity and debt financings. Although management believes that the Company will be able to successfully fund its operations, there can be no assurance that the Company will be able to do so or that the Company will ever operate profitably. Our activities since inception have consisted principally of acquiring product and technology rights, raising capital, and performing research and development. Historically, we have incurred net losses and negative cash flows from operations.

The Company expects to continue to incur substantial losses over the next several years during its development phase. To fully execute its business plan, the Company will need to complete certain research and development activities and clinical studies. Further, the Company's product candidates will require regulatory approval prior to commercialization. These activities may span many years and require substantial expenditures to complete and may ultimately be unsuccessful. Any delays in completing these activities could adversely impact the Company. The Company plans to meet its capital requirements primarily through issuances of debt and equity securities and, in the longer term, revenue from product sales.

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"), which contemplate continuation of the Company as a going concern. As of December 31, 2014, the Company had cash and cash equivalents of $214. Historically, the Company has incurred net losses and negative cash flows from operations. The Company believes its current capital resources are not sufficient to support its operations. Management intends to continue its research efforts and to finance

operations of the Company through debt and/or equity financings. Management plans to seek additional debt and/or equity financing through private or public offerings or through a business combination or strategic partnership. There can be no assurance that the Company will be successful in obtaining additional financing on favorable terms, or at all. These matters raise substantial doubt about the Company's ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of these uncertainties.

3.SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation - The consolidated financial statements include the accounts of Amarantus Bioscience Holdings, Inc. and its subsidiaries. All significant intercompany accounts and transactions have been eliminated.

Reclassification -Certain amounts in the prior period financial statements have been reclassified to conform to the presentation of the current period financial statements. These reclassifications had no effect on the previously reported net loss.

Use of Estimates - The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of expenses during the reporting period. Significant estimates include the fair value of derivatives, the fair value of stock-based compensation and warrants, the carrying value of intangible assets (patents and licenses), valuation allowance against deferred tax assets, and related disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Certain Significant Risks and Uncertainties - The Company participates in a global, dynamic, and highly competitive industry and believes that changes in any of the following areas could have a material adverse effect on the Company's future financial position, results of operations, or cash flows: ability to obtain future financing; advances and trends in new technologies and industry standards; regulatory approval and market acceptance of the Company's products; development of the necessary manufacturing capabilities and the Company's ability to obtain adequate resources of necessary materials; development of sales channels; certain strategic relationships; litigation or claims against the Company based on intellectual property, patent, product, regulatory, or other factors; and the Company's ability to attract and retain employees and other resources necessary to support its growth.

Concentration of Credit Risk - Financial instruments that potentially subject the Company to concentrations of credit risk consist of cash and cash equivalents. The Company places its cash and cash equivalents with domestic financial institutions that are federally insured within statutory limits.

Cash and Cash Equivalents - The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Restricted Cash – Cash restricted as to withdrawal or use is classified separately as restricted cash, and as current or non-current based upon the nature of the restriction.

Property and Equipment - Property and equipment are stated at cost and depreciated on a straight-line basis over the estimated useful lives as follows:

Equipment	3 years
Computer equipment	2 years
Furniture and fixtures	3 years

Intangible Assets – Intangible assets or certain rights to use certain intangible assets for the Company's research and development activities are capitalized as assets in cases where the Company has determined that those assets have an

identifiable alternative future use in accordance with GAAP. In certain cases, the Company may conclude certain assets have indeterminate useful lives in which case they are considered to have indefinite lives. The Company has determined that the useful lives of assets which can be reasonable estimated and amortized to expense over such useful lives range between 9.5 years and 18.5 years.

Impairment of Long-Lived Assets – The Company reviews the carrying value of long-lived assets, including intangible assets and property and equipment, for impairment whenever events or changes in circumstances indicate that the carrying value may not be fully recoverable. There have been no impairments during the years ended December 31, 2014 and 2013.

Research and Development Expenditures - Research and development expenses consist of personnel costs, including salaries, benefits and stock-based compensation, materials and supplies, licenses and fees, acquired in-process research and development, and overhead allocations consisting of various administrative and facilities related costs. Research and development activities consist primarily of three main categories: research, clinical development, and biotechnology development. Research costs typically consist of preclinical and toxicology costs. Clinical development costs include costs for clinical studies and trials. Biotechnology development costs consist of costs incurred for product formulation and analysis. Research and development costs are charged to expense when incurred.

Fair Value of Financial Instruments - The fair value of certain of the Company’s financial instruments, including cash and cash equivalents, accrued compensation, and other accrued liabilities, approximate cost because of their short maturities. The Company measures the fair value of certain of its financial assets and liabilities on a recurring basis. A fair value hierarchy is used to rank the quality and reliability of the information used to determine fair values. Financial assets and liabilities carried at fair value which is not equivalent to cost will be classified and disclosed in one of the following three categories:

- Level 1-Quoted prices (unadjusted) in active markets for identical assets and liabilities.

- Level 2-Inputs other than Level 1 that are observable, either directly or indirectly, such as unadjusted quoted prices for similar assets and liabilities, unadjusted quoted prices in the markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

- Level 3-Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Stock-Based Compensation - Stock-based compensation is measured at the grant date based on the fair value of the award. The fair value of the award that is ultimately expected to vest is recognized as expense on a straight-line basis over the requisite service period, which is generally the vesting period. The expense recognized for the portion of the award that is expected to vest has been reduced by an estimated forfeiture rate. The forfeiture rate is determined at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Grant-date fair value is determined using the Black-Scholes option pricing model, which requires the use of the following assumptions:

Expected Term — The expected term represents the period that awards are expected to be outstanding based on the simplified method, which is the half-life from vesting to the end of its contractual term.

Expected Volatility — Stock price volatility is computed over expected terms based on the historical common stock trading price of the Company’s common stock.

Risk-Free Interest Rate — The risk-free interest rate is estimated based upon the implied yield available on U.S. Treasury zero-coupon issues with an equivalent remaining term.

Expected Dividend — Cash dividends have never been declared or paid on common shares and there are no plans to do so in the foreseeable future such that the expected dividend yield is assumed to be zero.

Forfeiture Rate — The forfeiture rate is based on historical data and managements estimates of failure rate to achieve vesting conditions. Forfeiture rates are adjusted as actual forfeitures differ from managements estimates for the awards that actually vest in the period of the change in estimate.

The fair value of stock options granted to nonemployees is recognized over the period in which the related services are received.

Preferred Stock - Preferred shares subject to mandatory redemption are classified as liability instruments and are measured at fair value. The Company classifies conditionally redeemable preferred shares, which includes preferred shares that feature redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company's control, as temporary equity ('mezzanine') until such time as the conditions are removed or lapse.

Convertible Financial Instruments – The Company bifurcates conversion options from their host instruments and accounts for them as free standing derivative financial instruments if certain criteria are met. The criteria include circumstances in which (a) the economic characteristics and risks of the embedded derivative instrument are not clearly and closely related to the economic characteristics and risks of the host contract, (b) the hybrid instrument that embodies both the embedded derivative instrument and the host contract is not re-measured at fair value under otherwise applicable generally accepted accounting principles with changes in fair value reported in earnings as they occur and (c) a separate instrument with the same terms as the embedded derivative instrument would be considered a derivative instrument. An exception to this rule is when the host instrument is deemed to be conventional, as that term is described under applicable GAAP.

When the Company has determined that the embedded conversion options should not be bifurcated from their host instruments, discounts are recorded for the intrinsic value of conversion options embedded in the instruments based upon the differences between the fair value of the underlying common stock at the commitment date of the transaction and the effective conversion price embedded in the instrument. Deemed dividends are also recorded for the intrinsic value of conversion options embedded in preferred shares based upon the differences between the fair value of the underlying common stock at the commitment date of the transaction and the effective conversion price embedded in the preferred shares.

Common Stock Purchase Warrants and Derivative Financial Instruments - Common stock purchase warrants and other derivative financial instruments are classified as equity if the contracts (1) require physical settlement or net-share settlement or (2) give the Company a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). Contracts which (1) require net-cash settlement (including a requirement to net cash settle the contract if an event occurs and if that event is outside the control of the Company), (2) give the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement), or (3) that contain reset provisions that do not qualify for the scope exception are classified as assets or liabilities. The Company assesses classification of its common stock purchase warrants and other derivatives at each reporting date to determine whether a change in classification between assets and liabilities is required.

Debt Discounts - Debt discounts under these arrangements are amortized to interest expense using the interest method over the earlier of the term of the related debt or their earliest date of redemption.

Income Taxes - The Company accounts for income taxes using the liability method whereby deferred tax asset and liability account balances are determined based on differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company provides a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value.

In evaluating the ability to recover its deferred income tax assets, the Company considers all available positive and negative evidence, including its operating results, ongoing tax planning, and forecasts of future taxable income on a jurisdiction-by-jurisdiction basis. In the event the Company determines that it would be able to realize its deferred income tax assets in the future in excess of their net recorded amount, it would make an adjustment to the valuation allowance that would reduce the provision for income taxes. Conversely, in the event that all or part of the net deferred tax assets are determined not to be realizable in the future, an adjustment to the valuation allowance would be charged to earnings in the period such determination is made.

Interest and penalties related to uncertain tax positions are recorded in the provision for income tax expense on the consolidated statements of operations.

Net Loss Per Common Shareholder - Basic net loss per share is based upon the weighted average number of common shares outstanding. Diluted net loss per share is based on the assumption that all dilutive convertible shares and stock options were converted or exercised. Dilution is computed by applying the treasury stock method. Under this method, options, warrants and restricted stock are assumed to be exercised at the beginning of the period (or at the time of issuance, if later), and as if funds obtained thereby were used to purchase common stock at the average market price during the period. In periods in which dilutive securities are considered antidilutive, they are excluded from the computation.

Recently Issued Accounting Pronouncements

Accounting Standards Update (ASU) No. 2014-10, *Development Stage Entities (Topic 915): Elimination of Certain Financial Reporting Requirements, Including an Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation* removes all incremental financial reporting requirements for development stage entities, including the removal of reporting of the cumulative results of operations and cash flows for the period from inception to the end of the current period. The ASU is effective for the first annual period beginning after December 15, 2014. Early adoption is permitted, and the Company adopted this change during 2014.

ASU No. 2014-12*, Compensation – stock* requires that a performance target which affects vesting and could be achieved after the requisite service period should be treated as a performance condition that affects vesting, rather than a condition that affects the grant-date fair value. The ASU is effective for the first annual period beginning after December 15, 2015 and interim periods within those years for all entities. Early adoption is permitted. The Company is considering the effect of this FASB issuance, if any, on its financial statements. The Company has decided not to early adopt at this time.

ASU No. 2014-15, *Presentation of Financial Statements – Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern.* The amendments in this ASU are effective for the first annual period ending after December 15, 2016 and interim periods within those years for all entities. Early adoption is permitted. The Company is considering the effect of this FASB issuance, if any, on its financial statements. The Company has decided not to early adopt at this time.

ASU 2014-16, *Derivatives and Hedging (Topic 815): Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share Is More Akin to Debt or to Equity.* The amendments in this ASU are effective for the first annual period ending after December 15, 2015 and interim periods within those years. Early adoption is permitted. The Company is considering the effect of this FASB issuance, if any, on its financial statements. The Company has decided not to early adopt at this time.

4. balance sheet details

Prepaid expenses and other current assets:	As of December 31,	
	2014	2013
Prepaid expenses	$ 55	$ 92
Short-term deposits	97	—
Other	46	14
Total	$ 198	$ 106

Property and equipment:	As of December 31,	
	2014	2013
Furniture	$ 30	$ —
Computer equipment, software, and other equipment	146	—
Leasehold improvements	4	—
Total property and equipment	180	—
Accumulated depreciation	(35)	—
Total, net	$ 145	$ —

Accrued expenses:	As of December 31,	
	2014	2013
Accrued compensation and related benefits	$ 58	$ 266
Dividends on Series D and E convertible preferred stock	91	26
Total	$ 149	$ 292

Related party liabilities:	As of December 31,	
	2014	2013
Promissory note, 2% interest	$ 222	$ 222
Accrued interest	30	26
Total	$ 252	$ 248

The demand promissory note is due 365 days upon demand of the holder. At the option of the Company, the note and the accrued interest owed can be converted into common stock of the Company based on the closing price of the Company's common stock on the day of the conversion. The conversion price if converted on December 31, 2014 would be $0.0822 related to the note and accrued interest on the note and would convert to approximately 3,071,000 shares.

5. Fair Value Measurements

Fair value is defined under the standard as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market in an orderly transaction between market participants on the measurement date. The standard also establishes a three-level hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value

The Company had no financial assets or liabilities measured at fair value on a recurring basis at December 31, 2014. Financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2013, by level within the fair value hierarchy, are as follows:

	Level 1	Level 2	Level 3	Total
Derivative liability	—	—	5,859	5,859
Total fair value	$ —	$ —	$5,859	$5,859

The derivative liability at December 31, 2013 represents the fair value of embedded conversion options associated with certain of the Company's convertible notes, primarily the 8% senior convertible debentures as more fully described below. Additionally, these notes were all converted to common stock in 2014 as more fully described in Note 8.

The following table summarizes the changes in the fair value of the Company's Level 3 financial liabilities from January 1, 2013 to December 31, 2014:

	Warrant Liability	Derivative Liability	Total
January 1, 2013	$ 233	$ 27	$260
Issuance of convertible notes	—	8,582	8,582
Reclass to additional paid in capital	—	(2,712)	(2,712)
Change in fair value	(233)	(38)	(271)

December 31, 2013	—	5,859	5,859
Conversion of 8% senior convertible debentures to common stock	—	(5,542)	(5,542)
Change in fair value	—	(317)	(317)
December 31, 2014	$ —	$ —	$—

The changes in fair value for all periods presented have been recorded in the accompanying consolidated statements of operations as a component of other income (expense).

The fair value of the warrants at December 31, 2013 was determined using the Black-Scholes model with the following assumptions:

	2013
Annualized volatility	331% - 335%
Contractual life (years)	.04
Expected dividends	0%
Risk-free investment rate	0.62 - 0.91%

Derivative liability

For certain convertible debt obligations, the Company recorded a related derivative liability representing the estimated fair value of embedded conversion options and remeasured the fair value at each reporting date.

The fair values of the derivative liability measured at each reporting date and at conversion during 2014, and at December 31, 2013, were determined using the Black-Scholes model with the following assumptions:

	2014	2013
Annualized volatility	78% - 138%	316% - 368%
Contractual life (years)	0.08 – 0.67	0.03 - 0.93
Expected dividends	0%	0%
Risk-free investment rate	0.02% - 0.90%	0.01 - 0.12%

6. Net loss per share

The following table sets forth the computation of the basic and diluted net loss per share attributable to common stockholders for the periods indicated:

	Year Ended December 31,	
	2014	2013
Numerator		
Net loss	$(27,277)	$(15,132)
Preferred stock dividend	875	38
Net loss applicable to common stockholders	$(28,152)	$(15,170)
Denominator		
Weighted average shares outstanding during the period:		
Common stock - basic	738,950,704	450,931,510
Common shares equivalents	49,983,274	—
Common stock - diluted	788,933,978	450,931,510
Basic and diluted net loss per common share	$(0.04)	$(0.03)

Potentially dilutive securities consist of:

	As of December 31,	
	2014	2013
Outstanding common stock options	30,196,127	6,941,288
Outstanding preferred stock options	2,487,500	2,287,500
Related party liabilities	3,070,663	3,107,356
Warrants	46,636,722	84,553,306
Convertible promissory note(s)	—	6,325,000
8% senior convertible debentures	—	75,000,000

Convertible preferred stock- Series C	750,000	750,000
Convertible preferred stock- Series D	43,310,900	43,310,900
Convertible preferred stock- Series E	56,250,000	—

All of the listed dilutive securities are excluded from the computation of fully diluted loss per share as they are antidilutive.

7. intangible assets

Intangible assets consist of:	As of December 31,	
	2014	2013
Intellectual properties	1,685	$ 681
Accumulated amortization	(188)	(70)
Total intangible assets, net	$ 1,497	$ 611

Intangible assets are amortized over the expected remaining useful lives. As of December 31, 2014, amortization expense for the next five years is expected to be as follows:

2015	$128
2016	128
2017	128
2018	128
2019	128
Thereafter	857
Total	$1,497

8. Convertible Debt

The following summarize the Company's convertible debt obligations:

Convertible promissory notes

		Stated Interest			Principal Balance Outstanding As of December 31,	
Issue Date	**Maturity Date**	**Rate**		**Conversion Terms**	2014	2013
6/5/2013	12/2/2013	6.0	%	Fixed at $0.02	—	$ 20
11/4/2012	5/3/2013	6.0	%	Fixed at $0.01	—	10
8/23/2012	2/19/2013	6.0	%	Fixed at $0.015	—	50
11/2012	On Demand	None		Refundable excess payment	—	1
6/6/2011	6/6/2013	5.0	%	Variable at $0.04	—	10
4/11/2011	4/11/2013	5.0	%	Variable at $0.04	—	25
5/1/2011	5/1/2013	5.0	%	Fixed at $0.10	—	4
4/1/2011	4/1/2013	5.0	%	Fixed at $0.10	—	4
Total convertible promissory notes					$ —	$ 124

During 2014, all the convertible promissory notes consisting of $115 in principal and $14 in accrued interest were converted into approximately 6,938,000 shares of common stock and $9 in principal and $1 in accrued interest were paid in full to the note holders.

8% Senior convertible debentures

	Maturity	Stated Interest			Principal Balance Outstanding As of December 31,	
Issue Date	Date	Rate		Conversion Terms	2014	2013
10/2/2013	10/2/2014	8.0	%	Variable conversion price	$ —	$ 1,789
9/6/2013	9/6/2014	8.0	%	Variable conversion price	—	1,544

Total principal	—	3,333
Discount on convertible promissory notes	—	(2,401)
8% senior convertible debentures, net	$ —	$ 932

During 2014, all the 8% senior convertible debentures consisting of $3,333 in principal and $125 of accrued interest converted into approximately 86,473,000 shares of common stock of the Company. Amortization of the discount through the date of conversion totaled $582 was recorded as other expense. A loss on conversion of the debt of $1,250 was also recorded as other expense as a result of the fair value the Company's common stock at conversion exceeding the fair value of the debt, net of amortized discount and including the associated derivative liability.

2013 Restructuring of Certain Convertible Debentures and Related Warrants

In February 2013, the Company completed a series of transactions related to the restructuring of certain convertible debentures and related warrants that were in default. As a result, the Company executed two separate amended and restated Convertible Promissory Notes in the amounts of $375 and $187 (the "New Notes"), respectively, payable to Dominion Capital, LLC. The Company had defaulted on Promissory Notes issued in 2011 to certain individual investors in the total aggregate amount of $375 (the "Old Notes"), and related cashless warrants in the amount of $500. Dominion capital paid $563 to acquire the Old Notes, and as part of the transaction all of the related warrants were retired, inclusive of a $38 payment from the Company to certain warrant holders. The Old Notes and Related warrants had a conversion feature equal to a 66.6% floorless discount to a 'Next Equity Financing', defined as a financing where equity, or debt that was convertible into common stock, with a fixed price conversion feature. Such financing occurred, and as a result, $375 in notes became immediately convertible at a price of $0.015/share, equal to 25,000,000 common shares. The $188 was also priced at $0.015/share, however the note was not convertible for 6 months and the Company retained an option to repurchase this note at any time until maturity. The $188 note was converted into 12,500,000 common shares in July 2013.

January 2013 Convertible Promissory Note Amendment

In January 2013, the Company executed an amendment to a Convertible Promissory Note payable to Dominion Capital, LLC or its registered assigns (the "Dominion Note"), dated November 14, 2012, providing for an increase in the purchase price for such note from $600 to $2,000 to be disbursed in tranches through April 2013. The Dominion Note carried a stated interest rate of 10% per annum until paid in full and was convertible into shares of the Company's common stock, subject to certain restrictions, at a price of $0.10 per share. The Dominion Note was amended to provide for an extended amortization schedule with a final maturity date of October 2013. The Company had the option to pay the Dominion Note in cash or stock at its discretion, subject to certain conditions. The Company received all $600 from the initial agreement in 2012, and received additional funding in 2013. The extended amortization schedule provided for payments of $200 to $250 every 2 weeks until the end of April 2013. The amended notes were converted in 2013 into 94,130,499 common shares.

9. DEMAND PROMISSORY NOTE

On February 14, 2014, the Company executed a Demand Promissory Note payable to Dominion Capital, LLC ("Demand Note") in the amount of $500 at an annual interest rate of 12% compounded monthly until repayment. On March 12, 2014, the Company elected to extend the maturity of the Demand Note from March 14, 2014 to August 14, 2014. On August 14, 2014 and again on September 12, 2014 and October 12, 2014, the note holder agreed to extend the due date thirty days each time for a consideration of $10 in cash for the initial extension and $10 in common stock of the Company at each of the subsequent two extensions. The note was converted to Series E Preferred Stock prior to December 31, 2014.

10. commitments and contingencies

Commitments:

Lease Arrangements

The Company leases its main office facility and laboratory space in two separate locations in San Francisco, California. Office space in San Francisco is leased through November 2016 and provides for a monthly rental payment of approximately $12, plus operating expenses, subject to annual adjustment, of approximately $9 per month. The other facility lease is on a month-to-month basis.

Future non cancellable minimum lease payments are:

2015	146
2016	139
Total	$285

56

Rent expense for the years ended December 31, 2014 and 2013 was $150 and $30, respectively.

Research License, and Option to License Arrangements —

The Company is a party to various agreements which obligate it to make certain payments:

PGI Drug Discovery, LLC ("PGI") — Eltoprazine License and Services Agreements (January 2014)

The Company entered into several agreements with PGI in 2014. Under the license agreements, the Company acquired rights to certain intellectual property covering the use of Eltoprazine and certain of its related compounds. In exchange, the Company paid PGI a total of $750 and 4,000,000 shares of common stock valued at $250 for which the Company granted piggy-back registration rights. The Company also has a contingent liability to pay PGI up to $4,000 upon achievement of future development milestone events: $1,000 at completion of a phase IIb study and $3,000 at submission of a New Drug Application ("NDA") to the Food and Drug Administration ("FDA") or comparable application to a non-U.S. agency.

Simultaneously, the Company and PGI entered into a separate services agreement pursuant to which PGI will provide certain services related to PGI's proprietary analytical systems, in exchange for cash payments totaling $450 at a minimum annual rate of $150 for each of three years, payable in equal quarterly installments. Also, the company purchased $500 of clinical trial material.

The Washington University ("WashU") — Sponsored Research (June 2014)

The Company agreed to pay $120 to perform certain research of which $60 was paid in 2014. Wash U granted the Company (i) a non-exclusive, worldwide, royalty free license to utilize any inventions belonging solely to WashU conceived in WashU's performance of the research plan ("WashU Inventions"), and (ii) an exclusive option to obtain an exclusive, worldwide license with a right to grant sublicenses to utilize any WashU Inventions or joint inventions upon terms to be negotiated.

Buck Institute for Research on Aging ("Institute") — Sponsored Research (August 2014)

The Company agreed to pay $300, payable quarterly, to perform certain research of which $150 was paid in 2014.

The Institute granted the Company (i) a non-exclusive, worldwide, royalty free license to utilize any institute inventions, sole or joint, for research purposes, and (ii) an exclusive option to obtain an exclusive, worldwide license with a right to sublicense to utilize any institute inventions, sole or joint upon terms to be negotiated.

University of Miami ("U Miami") — Sponsored Research (October 2014)

The Company agreed to pay $155 to perform certain research payable in three installments, of which $52 was paid in 2014. On October 1 2014, the Company entered into a sponsored research agreement (the "Agreement") with the University of Miami on the use of MANF in retinal disorders. The agreement calls for three equal payments of $52 on October 30, 2014, April 1, 2015 and upon receipt of the final written report.

Acquiring Engineered Skin Substitute Intellectual Property - Lonza Walkersville

In May 2014, we entered into discussions with Lonza Walkersville, Inc. ("Lonza) to acquire from Lonza its wholly owned subsidiary Cutanogen Corporation ("Cutanogen"), which is the licensee of certain Engineered Skin Substitute ("ESS") intellectual property used to manufacture a product being developed to treat burn related injuries. At the time, Lonza was engaged in a lawsuit brought by Regenicin, Inc. relating to certain licensing rights associated with ESS. In order for the Company to acquire Cutanogen from Lonza, a resolution to the lawsuit was needed.

On October 27, 2014, we entered into an Agreement (the "Lonza Option Agreement") with Lonza pursuant to which we were granted an exclusive option to acquire Cutanogen (the "Option"). The terms of the acquisition are set forth in a draft Share Purchase Agreement (the "SPA") that has been negotiated between the Company and Lonza. Pursuant to the SPA, we would purchase all of the shares of Cutanogen as well as certain assets of Lonza (the "Lonza Assets") as listed in the draft SPA.

As set forth in the SPA, and as consideration for the Cutanogen shares, we will make payments to Lonza, based upon the following milestone schedule:

- $4,000 upon execution of the SPA;
- $1,000 upon (i) successful completion of a Phase 1 clinical trial, or (ii) submission for a Humanitarian Use Exemption or similar exemption ("HUE") for ESS (whichever occurs sooner); and
- $4,000 upon submission of a Biologic License Application to the Food and Drug Administration ("FDA") or the approval of an HUE by the FDA or European Medicines Agency ("EMA") (whichever occurs sooner).

In addition, the Company will pay to Lonza two percent (2%) of Net Sales (as defined in the SPA) of each Earnout Product (as defined in the SPA).

The company entered into an Option and Option amendments with Lonza that extended the Option period, and provided additional time for the Company to raise capital, and settle the Regenicin lawsuit. The Option and Option amendments provided that the Company would be required to make certain additional payments to Lonza, as described below. These payments are summarized below:

- $250 for the option period from November 7, 2014 to December 31, 2014,
- $400 for the option period from January 1, 2015 to February 28, 2015 and
- $300 for the option period from March 1, 2015 to March 31, 2015.

On March 27, 2015, the Company entered into a third amendment to the Option that further extended the Option period from March 31, 2015 to August 31, 2015, on a month-by-month basis. In connection with this third amendment, the Company will make additional periodic payments to Lonza, a portion of which will fund Lonza's continuing ESS development activity. Upon execution of this third amendment, the Company paid $350 to Lonza on March 31, 2015 and will pay the following additional amounts to Lonza until the earlier of such time as the Option is exercised or August 31, 2015:

- $400 on April 30, 2015 for the option period of April 1, 2015 to April 30, 2015,
- $600 on May 31, 2015 for the option period of May 1, 2015 to May 31, 2015,
- $600 on June 30, 2015 for the option period of June 1, 2015 to June 30, 2015 and
- $600 on July 31, 2015 for the option period of July 1, 2015 to July 31 2015

If the Company exercises the Option and consummates the SPA prior to any option payment being due, then no further payment(s) shall be required. In the event the SPA is not consummated, then the Company will incur a $1,000 break-up fee payable to Lonza.

The second step in the acquisition of ESS required the Company to enter into an Asset Purchase Agreement (the "Regenicin APA") with Regenicin, Inc. ("Regenicin") and other interested parties under which the Company agreed to acquire certain assets of Regenicin (the "Assets"), including (i) rights to the aforementioned lawsuit that Regenicin brought against Lonza (the "Litigation"), and (ii) all intellectual property rights held by Regenicin, related to any engineered skin technology for the treatment of severe burns in humans, including any related trademarks. The Regenicin APA was executed October 27, 2014. As consideration to Regenicin, the Company agreed to pay to Regenicin a total of $3,600 and 37,500,000 shares of Amarantus common stock. The shares were issued to Regenicin in November 2014 (valued at approximately $3,000), along with cash payments of $1,100. The remaining cash payments of $2,500 due to Regenicin under the Regenicin APA were paid by the end of February 2015. The asset purchase was recorded at its fair value as in-process research and development expense.

In addition to the Litigation and intellectual property noted above, the Company received from Regenicin an exclusive five (5) year option to license additional intellectual property related to severe burn products developed by Regenicin for an exercise price of $10,000 plus a royalty of 5% on gross revenues in excess of $150,000.

As a result of the Regenicin APA, the Company was able to acquire the Litigation, which it subsequently dismissed with prejudice. The Company is now able to pursue the execution of the Option and the SPA with Lonza to acquire Cutanogen.

Memory Dx, LLC ("MDx")—Asset Purchase and License Agreement (April 2014)

In conjunction with a purchase agreement in which the Company purchased all assets of MDx, including intellectual property, dependent upon (i) the Company entering into a direct licensing agreement with the University of Leipzig ("Leipzig") pursuant to which Leipzig would grant the Company a direct license to certain assets now licensed to MDx by Leipzig, and (ii) MDx terminating the license agreement it currently holds with Leipzig with the Company's prior written consent, the Company will issue to MDx 6,500,000 shares of the Company's common stock and will provide MDx with piggy-back registration rights for the shares.

Royalty Agreement — Founders

In October 2010, the Company entered into an agreement with the founders, Gerald Commissiong and John Commissiong, where they will receive a total of 2.5% royalty (1.25% each) from the gross commercial revenue of patents derived from the Company's proprietary PhenoGuard platform technology, including patents associated with the MANF Protein and related Gene. To date no payments have been made as no milestones have been reached.

The Company has entered into other license agreements during 2014 which are cancellable at the option of the Company with no more than 90 days notice. In the event the agreements are in force at the time certain clinical trial and regulatory milestone events occur, the Company will be required to make certain payments, as well as royalties on future sales and patent costs. In some cases, the Company will pay an annual fee to be applied to milestone or royalty payments.

From time to time, the Company may become involved in litigation.

11. PREFERRED STOCK

Series A Convertible Preferred Stock

In May 2012, the Company designated a class of preferred stock as Series A Convertible Preferred Stock. The Series A shares have no entitlement to dividends and have no voting rights. In any event of dissolution, liquidation or winding up of the Company, the Series A shares are entitled to receive a stated value of $1.00 per share. All distributions made to holders of the Series A shares and to holders of other stock of the Company upon liquidation shall be made on a *pari passu* basis with distributions made to holders of the Company's common stock. The series A shares are convertible into the Company's common stock at a stated conversion price that is equal to the lesser of 1) 110% of the closing common stock price on the date of conversion or 2) 80% of the lowest closing common stock price occurring during a 30 trading day period prior to notice of conversion. During 2013 the registered holder of the Company's Series A convertible preferred stock converted all 250,000 shares into 8,094,117 shares of the Company's common stock. The Series A Convertible Preferred Stock was converted in January 2013 as part of a services settlement with a vendor.

Series B Preferred Stock

On April 2, 2013 the Company filed a Certificate of Designation with the State of Nevada formally creating a series of Series B Convertible Preferred Stock. The Series B Convertible Preferred Stock can only be issued to officers,

directors and advisors of the Company, and cannot be converted into common stock, transferred, sold or disposed of in any manner for 24 months.

Series C Convertible Preferred Stock

On April 1, 2013, the Company filed a Certificate of Designation with the State of Nevada creating a series of Series C Convertible Preferred Stock. The Series C Convertible Preferred Stock can only be issued to officers and directors of the Company, is convertible into a cumulative total of 750,000 common shares and is automatically convertible into common stock upon listing of the Company's common stock to a national stock exchange. The holders of Series C shares are entitled to 300 common stock equivalent votes per share on all corporate matters except those that by law only require a single series vote.

Series D Convertible Preferred Stock

On August 19, 2013, the Company entered into a securities purchase agreement with an institutional investor (the "Investor") pursuant to which the Company issued shares of newly designated Series D Convertible Preferred Stock ("Series D Preferred Stock") to the Investor in exchange for the Investor agreeing to paying off certain accounts payables of the Company, up to an aggregate approximate amount of $1,250.

On August 19, 2013, the Company filed a Certificate of Designation designating 1,300 of our preferred stock as Series D Preferred Stock. Each share of Series D Preferred Stock has a stated value of $1,000 and pays on a quarterly basis 8% cumulative dividends per annum. Dividends are payable by the Company in cash or at the Company's option, in shares of common stock. The Series D Preferred Stock has no voting rights except in certain circumstances which would adversely affect the Series D Preferred Stockholders. Each share of Series D Preferred Stock is convertible at any time into shares of common stock by dividing the stated value per share by the then effective conversion price. The conversion price for the Series D Preferred Stock is $0.03 per share, subject to adjustment under certain conditions. The Series D Preferred Stock is also subject to redemption by the Series D Preferred Stockholders upon certain triggering events. The redemption amount is equal to the greater of 130% of the stated value or the stated value divided by the then conversion price multiplied by the volume weighted average price ("VWAP") on the trading day immediately preceding the triggering event, plus any accrued and unpaid dividends. The redemption payment may, at the option of the holder, be in cash or shares. Redemption triggering events may include certain events such as change of control, bankruptcy, junior security redemptions, common stock shall fail to be listed or quoted on a Trading Market for more than five Trading Days, or other adverse events as described under the agreement. Series D Preferred Stock also has a liquidation preference equal to the Stated Value.

No triggering event has occurred.

On June 30, 2014, with the approval of the holder of the Company's Series D Preferred Stock, the Company filed an amendment to the Certificate of Designation of the Series D Preferred Stock to amend remove the feature by which stockholder could require redemption of the stock at cost. Accordingly, since the Series D Preferred Stock now contains mainly equity-like features, the Company changed the classification of the stock on its balance sheet from temporary equity to permanent equity within stockholders' equity (deficit).

The securities were issued at 10% discount and contain a beneficial conversion feature. The beneficial conversion feature has been accreted, resulting in a deemed dividend reflected in the December 31, 2014 Consolidated Statements of Stockholders' Equity (Deficit). The value of the original issue discount is $130 and the beneficial conversion feature is $321.

Series E Convertible Preferred Stock

On November 7, 2014, the Company entered into securities purchase agreements pursuant to which the Company issued 4,500 shares of Series E Convertible Preferred Stock ("Series E Preferred Stock") which has a stated value of $1,000 and pays quarterly 12% cumulative dividends per annum. Dividends are payable by the Company in cash or at the Company's option, in shares of common stock if certain conditions are met. These conditions include availability of funds or no occurrence of a triggering event. Triggering events include change of control, bankruptcy, junior security redemptions, common stock shall fail to be listed or quoted on a Trading Market for more than five Trading Days. No triggering event has occurred.

Holders of Series E shares are entitled to three years of dividends even if converted up to three years following the issuance date. Each share of Series E Preferred Stock is convertible into shares of common stock by dividing the stated value per share by the then effective conversion price. The conversion price for the Series E is $0.08 per share, subject to adjustment under certain conditions, but in no event prior to six months from issuance. Series E Preferred stockholders have the right to vote on all matters submitted to the Company's shareholders and the Series E Preferred Stock are entitled to such number of votes on an as-converted basis. Series E Preferred Stock also has a liquidation preference equal to the stated value and accrued and unpaid dividends.

During 2014, the Company sold 3,944 shares of Series E Preferred Stock for proceeds of $3,507, net of issuance costs of $43. The Company also issued 556 shares to retire a $500 demand promissory note.

The securities were issued at 10% discount and contain a beneficial conversion feature. The beneficial conversion feature has been accreted, resulting in a deemed dividend reflected in the December 31, 2014 Consolidated Statements of Stockholders' Equity (Deficit). The value of the original issue discount is $450 and the beneficial conversion feature is $376.

Preferred Stock Dividends

As described in Note 11, Preferred Stock, certain of the Company's outstanding preferred stockholders are entitled to a certain amount of dividends even if converted.

Common Stock Purchase Warrants

The following table summarizes the Company's warrant activity for the years ended December 31, 2013 and December 31, 2014:

	Number of Warrants	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term
Outstanding as of December 31, 2012	12,584,829	$ 0.04	4.74
Issued in connection with convertible debt offerings	83,333,250	0.06	
Exercised	—	—	
Cancelled	(11,364,773)	0.04	
Outstanding as of December 31, 2013	84,553,306	$ 0.06	2.69
Issued in connection with warrant exchange	45,000,000	0.12	
Exercised	(82,916,584)	0.06	
Outstanding (exercisable) as of December 31, 2014	46,636,722	$ 0.12	4.06

The warrants issued in 2013 are exercisable for a term of three years from the date of issuance at an exercise price of $0.06 per share and exercisable on a cashless basis if at any time after the six month anniversary there is no effective registration statement or current prospectus available for the resale of the shares underlying the warrants.

Warrant Exchange

Pursuant to an offer to exercise dated February 13, 2014 as supplemented on March 6, 2014, holders of outstanding warrants at a price of $0.06 ("Original Warrants") were offered the opportunity to exercise their Original Warrants and receive new warrants ("New Warrants") to purchase three shares of common stock of the Company for every four Original Warrants exercised. On March 7, 2014, warrant holders exercised 60,000,000 Original Warrants and received New Warrants to purchase 45,000,000 shares of common stock of the Company.

The New Warrants are exercisable at a price of $0.12 for a term of five years. The New Warrants are callable by the Company if the Volume Weighted Average Price (VWAP) of the Company's common stock for each of 20 consecutive trading days exceeds $0.18 and certain equity conditions are met. The Company may also call the New Warrants if the closing price of the Company's common stock exceeds $0.18 on the date that is the earlier of the receipt by the Company of an approval letter for listing of the Company's common stock on an exchange or listing of the common stock on an exchange. The holders of the New Warrants will also have piggy-back registration rights.

The Company recorded a loss on issuance of $3,867 in other expense for the warrant exchange based on the fair value of the warrants. The fair value was determined to be using the Black-Scholes model with the following assumptions which the Company believes approximates the fair value under a binomial lattice model:

Annualized volatility [1]	305 %
Contractual term	5.0
Risk-free investment rate	1.65%
Dividend yield	0.0 %

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12. COMMON STOCK

The Company is authorized to issue 2,000,000,000 shares of common stock, $0.001 par value. The holders of common stock: (i) have equal rights to dividends from funds legally available therefore, ratably when as and if declared by the Company's Board of Directors; (ii) are entitled to share ratably in all assets of the Company available for distribution to holders of common stock upon liquidation, dissolution, or winding up of the affairs of the Company; (iii) do not have preemptive, subscription or conversion rights and there are no redemption or sinking fund provisions applicable thereto; (iv) are entitled to one non-cumulative vote per share of common stock, on all matters which shareholders may vote on at all meetings of shareholders; and (v) the holders of common stock have no conversion, preemptive or other subscription rights. There is no cumulative voting for the election of directors. Each holder of our common stock is entitled to one vote for each share of our common stock held on all matters submitted to a vote of stockholders. As of December 31, 2014, our Board of Directors had declared no dividends payable to holders of our common stock.

Common stock private placement

In March 2014, the Company entered into an equity financing agreement ("LPC Purchase Agreement") with Lincoln Park Capital Fund LLC ("LPC") whereby LPC is obligated to purchase up to $20,000 of the Company's common stock from time to time over a 30 month period, as directed by the Company and subject to certain requirements, restrictions and limitations. Under the LPC Purchase Agreement, the per share purchase price will be the lesser of the lowest sale price of common stock on the purchase date or the average of the three lowest closing purchase prices during the ten consecutive business days prior to the purchase date. However, LPC is not obligated to purchase shares from the Company on any date that the closing price of the common stock is below $0.04, subject to adjustment upon the occurrence of certain stock related events. The Company may also request that LPC purchase shares under an accelerated purchase notice whereby the per share purchase price will be the lower of (i) 94% of a volume weighted average price calculation as determined under the LPC Purchase Agreement or (ii) the closing price of the common stock on the accelerated purchase date.

Concurrently with the execution of the LPC Purchase Agreement, LPC purchased an initial 4,000,000 shares for gross proceeds of $400.

In consideration for entering into the LPC Purchase Agreement, the Company will issue 9,500,000 shares of common stock to LPC (the 'Commitment Fee Shares'), 6,000,000 of which upon entering into the agreement and 3,500,000 contingently issuable on a pro rata basis as the Company utilizes the financing arrangement. The agreement will automatically terminate upon the earlier of 30 months (August 2016) or upon full utilization of the purchase commitment.

Issuances through December 31, 2014 and the remaining available amounts under the financing agreement:

	Commitment Fee Shares	Shares Sold	Financing Available
Total under agreement	9,500,000		$ 20,000
Issued at execution	(6,000,000)	4,000,000	
Issued subsequent to execution	(468,001)	26,041,120	(2,674)
Total activity	(6,468,001)	30,041,120	(2,674)
Available for issue at December 31, 2014	3,031,999		$ 17,326

The fair value of the 6,000,000 Commitment Fee Shares initially issued to LPC was approximately $516 at issue and initially recorded as a deferred funding fee asset. The fee, as well as fair value at issue of subsequent Commitment Fee Shares, has been recognized as additional paid in capital as of December 31, 2014.

13. Stock option planS

2008 Stock Plan

The Company’s Board of Directors approved the 2008 Stock Plan (the “Plan”). Under the Plan, the Company may grant up to 46,119,832 shares of incentive stock options, nonqualified stock options, or stock awards to eligible persons, including employees, nonemployees, members of the Board of Directors, consultants, and other independent advisors who provide services to the Company. In general, options are granted with an exercise price equal to the fair value of the underlying common stock on the date of the grant. Options granted typically have a contractual life of 10 years and vest over periods ranging from being fully vested as of the grant date to four years.

The following table is a summary of activity under the 2008 Plan:

	Common stock options outstanding	Weighted Average Exercise Price ($)	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ($000)
Balance – December 31, 2012	1,829,026	$ 0.02	6.4	
Options granted (weighted-average fair value of $0.52)				
Employee	776,924	0.05	9.2	
Non-employee	5,746,155	0.05	9.2	
Options cancelled	(1,210,817)	0.01	—	
Options exercised	(200,000)	0.05	—	
Balance December 31, 2013	6,941,288	0.05	9.0	$ 0
Options granted (weighted-average fair value of $0.08)				
Employee (1)	12,500,000	0.09	9.3	
Non-employee	3,301,323	0.08	9.3	
Options cancelled	(1,146,484)	0.07	—	
Options exercised	—	—	—	
Balance December 31, 2014	21,596,127	$ 0.08	8.8	$ 47
Options vested December 31, 2014	16,303,994			

(1) Includes 4,000,000 shares granted to Robert Farrell, the Company's Chief Financial Officer, 2,000,000 of which are performance-based and vest upon continued service and achievement of a specific goal; and 2,000,000 of which are market-based and vest upon continued service and the Company's achievement of certain stock price targets. All of these shares have an exercise price of $0.08.

The amount of awards available to grant under the Plan is 1,346,484 as of December 31, 2014.

2014 Stock Plan

In August 2014, the Company adopted the 2014 Stock Plan (the "2014 Plan"), which was approved by the Company's stockholder at the Company's Annual Meeting in September 2014. Under the 2014 Plan, the Company may grant up to 153,880,168 common shares in the form of incentive stock options, nonqualified stock options or stock awards to eligible persons, including employees, nonemployees, members of the Board of Directors, consultants, and other independent advisors who provide services to the Company. In general, options are granted with an exercise price

equal to the fair value of the underlying common stock on the date of the grant. Options granted typically have a contractual life of 10 years and vest over periods ranging from being fully vested as of the grant date to four years.

The following table is a summary of activity under the 2014 Plan:

	Common Stock options outstanding	Weighted Average Exercise Price ($)	Weighted Average Remaining Contractual Term (years)
Balance – December 31, 2013	—-	—-	—-
Options granted (weighted-average fair value of $0.09)			
Employee	8,600,000	0.09	9.8
Non-Employee	—	—	—
Options cancelled	—	—	—
Options Exercised	—	—	—
Balance December 31, 2014	8,600,000	0.09	9.8
Options vested as of December 31, 2014	716,016		

The amount of awards available to grant under the 2014 Plan is 145,280,168 as of December 31, 2014.

2012 Preferred Stock Plan

In July 2012, our Board of Directors adopted a new stock plan, the Management, Employee, Advisor and Director Preferred Stock Option Plan – 2012 Series B Convertible Preferred Stock Plan ("Preferred Stock Plan"). The purposes of the Preferred Stock Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Management, Employees, Advisors and Directors and to promote the success of our business. Certain current and former Management, Employees, Advisors and Directors were awarded a total of 1,248,000 options to purchase Series B Preferred shares on July 15, 2012, and an additional 1,200,000 options on November 4, 2012. These options currently vest over four years and cannot be converted into common shares or sold for two years from the date of the Designation of the Series B Preferred shares. Each share of Series B Preferred stock converts into fifty shares of common stock. The following table is a summary of activity under the Preferred Stock Plan:

	Preferred Stock Options Outstanding	Weighted Average Exercise Price ($)	Weighted Average Remaining Contractual Term (years)
Balance – December 31, 2012	2,448,000	0.46	9.6
Preferred options granted (weighted-average fair value of $0.0237)			
Employee	—	—	—
Non-employee	—	—	—
Preferred options cancelled	(160,500)	0.23	—
Balance – December 31, 2013	2,287,500	0.47	8.5
Preferred options granted (weighted-average fair value of $1.61)			
Employee	200,000	2.21	9.3
Non-employee	—	—	—
Preferred options cancelled	—	—	—
Balance – December 31, 2014	2,487,500	$ 0.61	8.1
Preferred options vested at December 31, 2014	1,986,068		

The amount of awards available to grant under the Preferred Stock Plan is 512,500 as of December 31, 2014.

Stock-based compensation expense for all plans for the years ended December 31, 2014and 2013 is classified in the statements of operations as follows:

	Year Ended December 31,	
	2014	2013
Research and development	$412	$338
General and administrative	890	406
Total	$1,302	$744

At December 31, 2014, there was a total of $1,510 of unrecognized compensation cost net of estimated forfeitures related to un-vested stock-based awards, which is expected to be recognized over a weighted-average period of approximately 2.5 years.

The fair value of the Company's stock-based awards during the twelve months ended December 31, 2014 and 2013 were estimated using the following assumptions:

	Year Ended December 31,			
	2014		2013	
Weighted-average volatility	288	%	90	%
Weighted-average expected term	5.8		5.0	
Expected dividends	0	%	0	%
Risk-free investment rate	2	%	2	%
Expected forfeiture rate	0	%	0	%

14. INCOME TAXES

There is no provision for income taxes because we have incurred operating losses since inception and applied a full valuation allowance against all deferred tax assets. The reported amount of income tax expense attributable to operations for the year differs from the amount that would result from applying domestic federal statutory tax rates to loss before income taxes from operations as summarized below:

	Year ended December 31,	
Loss before income taxes	2014	2013
United States	$ (27,278)	$ (15,132)
Foreign	—	—
Total Income (Loss) before income taxes	$ (27,278)	$ (15,132)

Income tax expense (benefit) for the years ended December 31, 2014 and 2013 differed from the amounts computed by applying the statutory federal income tax rate of 34% to pretax income (loss) as a result of the following:

	Year ended December 31,	
	2014	, 2013
Federal tax expense (benefit) at statutory rate	$ (9,274)	$ (5,145)
State tax expense (benefit), net of federal tax effect	(1,334)	(539)
R&D credit	(269)	(46)
Non-deductible expenses	1,696	2,192
Change in valuation allowance	9,181	3,538
Total tax expense	$ —	$ —

	Year ended December 31,	
	2014	2013

Federal tax expense (benefit) at statutory rate	(34.0	)%	(34.0	)%
State tax expense (benefit), net of federal tax effect	(4.9	)%	(3.6	)%
R&D credit	(1.0	)%	(0.3	)%
Non-deductible expenses	6.2	%	14.5	%
Change in valuation allowance	33.7	%	23.4	%
Total tax expense	—	%	—	%

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The significant components of deferred tax assets are as follows:

	As of December 31,	
	2014	2013
Net operating loss carry-forward	$ 12,835	$ 7,320
Tax credit carry-forward	504	204
Accrued liabilities	1,257	723
Capitalized start-up costs	15	15
Depreciation and amortization	2,833	1
Gross deferred tax assets	17,444	8,263
Valuation allowance	(17,444)	(8,263)
Net deferred tax assets	$ —	$ —

The Company's accounting for deferred taxes involves the evaluation of a number of factors concerning the realizability of the Company's net deferred tax assets. The Company primarily considered such factors as the Company's history of operating losses, the nature of the Company's deferred tax assets and the timing, likelihood and amount, if any, of future taxable income during the periods in which those temporary differences and carryforwards become deductible. At present, the Company does not believe that it is more likely than not that the deferred tax assets will be realized; accordingly, a full valuation allowance has been established and no deferred tax asset is shown in the accompanying balance sheets. The valuation allowance increased by approximately $9,181 and $3,538 during the years ended December 31, 2014 and December 31, 2013, respectively.

As of December 31, 2013, the Company had net federal and state net operating loss carry-forwards of approximately $18,374 and $18,378, respectively. These net operating loss carry forwards will begin to expire, if not utilized, beginning in 2028 for both federal and state income tax purposes. The Company also has federal and state research and development credit carry-forwards of approximately $134 and $141, respectively. The federal credits will expire if not utilized beginning in 2029. The California credits do not expire. As of December 31, 2014, the Company had net federal and state net operating loss carry-forwards of approximately $32,226 and $32,190, respectively. These net operating loss carry forwards will begin to expire, if not utilized, beginning in 2028 for both federal and state income tax purposes. The Company also has federal and state research and development credit carry-forwards of approximately $398 and $193, respectively. The federal credits will expire if not utilized beginning in 2029. The California credits do not expire.

The Tax Reform Act of 1986 and similar California legislation impose substantial restrictions on the use of net operating losses and tax credits in the event of an ownership change of a corporation. Accordingly, the Company's ability to use net operating losses and credit carry forwards may be significantly limited in the future as a result of such an ownership change.

The Company follows GAAP with regard recognition, measurement, presentation and disclosure in financial statements of any uncertain tax positions that have been taken or expected to be taken on a tax return. No liability related to uncertain tax positions is recorded on the financial statements. It is the Company's policy to include penalties and interest expense related to income taxes as a component of tax expense, as necessary.

A summary of unrecognized tax benefits is as follows:

Ending balance at December 31, 2012	$	17
Increase (decrease) of unrecognized tax benefits taken in prior years		—
Increase (decrease) of unrecognized tax benefits related to current year		10
Increase (decrease) of unrecognized tax benefits related to settlements		—
Reductions to unrecognized tax benefits related lapsing statute of limitations		—
Ending balance at December 31, 2013	$	27
Increase (decrease) of unrecognized tax benefits taken in prior years		—
Increase (decrease) of unrecognized tax benefits related to current year		35
Increase (decrease) of unrecognized tax benefits related to settlements		—
Reductions to unrecognized tax benefits related lapsing statute of limitations		—
Ending balance at December 31, 2014	$	62

The total amount of unrecognized tax benefits that if recognized, would affect the effective tax rate is $0.

The Company has not incurred any interest or penalties as of December 31, 2014. The Company does not anticipate any significant change within 12 months of this reporting date of its uncertain tax positions. The Company is subject to taxation in the US and California. There are no ongoing examinations by taxing authorities at this time.

The Company's tax years 2008 through 2014 will remain open for examination by the federal and state authorities for three and four years, respectively, from the date of utilization of any net operating loss credits.

15. Related-Party Transactions

Consulting Agreement –Director

The Company has an agreement with a NeuroAssets Sarl, a Swiss-based company to provide consulting services to the Company. Dr. David Lowe was appointed to the Company's Board of Directors in November 2013 and is the president and chief executive officer of NeuroAssets. The Company recorded $660 and $350 in consulting fees to NeuroAssets for the years ended December 31, 2014 and 2013, respectively.

The Company has an agreement with Joseph Rubinfeld to provide consulting services to the company. Joseph Rubinfeld was appointed to the Company's Board of Directors in November 2012. The company recorded $142 and $10 in consulting fee for the years ended December 31, 2014 and 2013, respectively.

Related Party Debt and Capital Transactions

At December 31, 2013, one of the Company's Directors, Robert Harris, held $66 of convertible promissory notes with the Company. The notes were converted during 2014 such that a total of 4,990,925 shares of common stock were issued for principal and accrued interest.

In October 2013, the Company's Chief Executive Officer, Gerald Commissiong, its Chief Scientific Officer, John Commissiong and one of the Company's Directors Robert Harris invested $5 each or an aggregate of $15 in total and was each issued an 8% senior convertible debenture in the principal aggregate amount of $6 and a warrant to purchase 138,889 shares. Each of the debentures was converted to shares of common stock during 2014 such that a total of 147,265 shares of common stock were issued to each Messrs. Gerald Commissiong and John Commissiong for principal and accrued interest. The shares underlying the debentures and warrants purchased by Messrs. Gerald Commissiong, John Commissiong and Robert Harris were not included in the related registration statement.

16. SUBSEQUENT EVENTS

The Company evaluated subsequent events through the date that its financial statements were available for issuance.

Common Stock Purchase Agreement

Through March 25, 2015, the Company has sold an additional 37,445,801 shares of common stock for gross proceeds of $2,767 under its agreement with LPC, and issued an additional 484,248 Commitment Fee shares.

Series D Convertible Stock

- On March 11, 2015 Dominion Capital exercised 299 Series D shares to 9,977,567 common shares.
- On March 25, 2015 Dominion Capital exercised 250 Series D shares to 8,333,333 common shares.

Series E Convertible Preferred Stock

Through March 31 2015, the Company has sold an additional 3,278 shares of Series E convertible preferred stock for gross proceeds of $2,950.

On March 4, 2015 Dominion Capital LLC converted 500 Series E shares to 6,250,000 common shares as well as 2,375,624 Make-Whole shares.

On April 2, 2015, the Company filed an amended and restated Certificate of Designation of its Series E Preferred Stock (The "Amendment"). The Amendment increased the number of authorized Series E Preferred Stock from 7,779 to 13,335 and changed the conversion price for the Series E Preferred Stock from $0.08 to $0.05, subject to adjustments, provided no adjustments shall be made until October 31, 2015

The Amendment also provides that simultaneously with the consummation of a Qualified Public Offering (defined in the Amendment as a public offering for gross proceeds of at least $10,000,000 and listing on a national securities exchange) each share of outstanding Series E Preferred Stock, together with any unpaid Dividends shall be converted into shares of Common Stock of the Company subject to adjustments at a conversion price per share of Series E Preferred Stock equal to the lower of $0.05 or 85% of the public offering price of the Qualified Public Offering ("Mandatory Conversion Price"). In addition, 30% (25% if no warrants are sold to the public in the Qualified Public Offering) of the Stated Amount of the outstanding Preferred Stock together with any Make-Whole Amount shall, at the Company's option, in whole or in part, be paid in cash or in shares of common stock priced at the Mandatory Conversion Price.

As consideration for the agreeing to the Amendment, the existing Series E Preferred Shareholders received, an aggregate of 30,000,000 shares of common stock pro rata to the Stated Value of Series E Preferred Stock then held by each holder.

DioGenix Acquisition

On January 8, 2015, the Company entered into an Agreement and Plan of Merger (the "Merger Agreement") with DioGenix, Inc., a Delaware corporation ("DioGenix"), in which the Company acquired all of the outstanding equity interests of DioGenix. Total consideration for the acquisition is 99,378,881 shares of the Company's common stock and up to $2,000 in additional payments to DioGenix stockholders in cash or combination of cash and common stock, conditioned on the achievement of certain milestones related to results of clinical testing and future revenue from products in development. A portion of the consideration will be placed into escrow to satisfy certain indemnification obligations of DioGenix stockholders. The shares of the Company issued may, upon the request of the Company, be made subject to lock-up agreements precluding sale of such shares as described in the Merger Agreement. The company will obtain a report from a valuation specialist, pro forma information is currently not available.

The Merger Agreement also includes registration rights whereby the Company will file a registration statement with the Securities and Exchange Commission covering the consideration paid with common stock within 120 days of the closing of the transaction, subject to certain terms and conditions, including certain penalties to the Company for delay in registering the shares.

The Company incurred approximately $500 of transaction fees at closing.

Note payable

On February 23, 2015, the Company entered into a Securities Purchase Agreement with Dominion Capital pursuant to which the Company issued a 12% Promissory Note (the “February Note”) in the principal amount of $2,500 due and payable on December 23, 2015 in cash or stock or a combination at The Company’s option. At any time upon ten (10) days written notice to Dominion Capital, the Company may prepay any portion of the principal amount of the Note and any accrued and unpaid interest at an amount equal to 110% of the then outstanding principal amount of the Note and guaranteed interest, 10% of which may be paid in cash or, at the Company’s option, in common stock or a combination thereof.

The February Note contains certain customary Events of Default (including, but not limited to, default in payment of principal or interest thereunder, breaches of covenants, agreements, representations or warranties thereunder, the occurrence of an event of default under certain material contracts of the Company, including the transaction documents relating to the Note transaction, changes in control of the Company and the entering or filing of certain monetary judgments against the Company). Upon the occurrence of any such Event of Default the outstanding principal amount of the February Note, plus accrued but unpaid interest, liquidated damages, and other amounts owing in respect thereof through the date of acceleration, shall become, at the Investor’s election, immediately due and payable in cash. Upon any Event of Default that results in acceleration of the February Note, the interest rate on the Note shall accrue at an interest rate equal to the lesser of 24% per annum or the maximum rate permitted under state law at the time of the default..

In connection with the February Note Transaction, effective on February 23, 2015, the Company entered into a Security Agreement with the Investor (the "Security Agreement") pursuant to which the Company granted a security interest in certain of its property (the "Collateral") to Dominion Capital in order to secure the prompt payment, performance and discharge in full of all of the Company's obligations under the Note. The Collateral shall consist of all of the Company's rights, title and interest in and to that certain Asset Purchase Agreement, dated November 7, 2014, by and among the Company, Regenicin, Inc., Clark Corporate Law Group, LLP, and Gordon & Rees, LLP and that certain Option Agreement, dated November 7, 2014, by and between the Company and Lonza Walkersville.

As part of the financing, Dominion received 1,250,000 shares of the Company's restricted common stock valued at $98.

On March 31, 2015, the Company issued an additional Note to Dominion in the principal amount of $350. The March Note was issued upon the same terms and conditions as the February Note.

Georgetown University Option to License

On January 13, 2015, the Company entered into an Exclusive Option Agreement (the "GU Option Agreement") with the Georgetown University ("GU") pursuant to which the Company was granted an option to obtain an exclusive license (with the right to sublicense) from Georgetown based upon certain patented technologies entitled "BLOOD BASED BIOMARKERS FOR MEMORY LOSS" (the "Technologies"). The term of the option is 12 months which may be extended mutual written consent of the parties. In consideration for the grant of the option, the Company paid an option fee of $75.

Prior to exercise of the option, the Company must (i) satisfy certain milestones as further described in the Agreement, (ii) obtained financing of at least $10,000 of which $3,000 shall be used to commercialize the Technologies, (iii) shall have sponsored at least $500 worth of research at Georgetown throughout the course of the term of the Agreement, and (iv) has submitted, to GU, a business plan for commercialization of the Technologies.

The Agreement contemplates that the parties, upon exercise of the Option, will use good faith efforts to execute a license agreement within 120 days of the exercise of the Option.

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

Not applicable

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures. Our management, with the participation of our chief executive officer and our principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, our chief executive officer and our principal financial officer concluded that our disclosure controls and procedures as of the end of the period covered by this report were not effective to ensure that information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms and (ii) accumulated and communicated to our management, including our chief executive officer and our principal financial office, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. A controls system cannot provide absolute assurance, however, that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

Management's Annual Report on Internal Control over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes of accounting principles generally accepted in the United States.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance of achieving their control objectives.

Our management, with the participation of our Chief Executive Officer and our Principal Financial Officer, evaluated the effectiveness of the Company's internal control over financial reporting as of December 31, 2014. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control — Integrated Framework. Based on this evaluation, our management, with the participation of the CEO, concluded that, as of December 31, 2014, our internal control over financial reporting was ineffective and identified the following material weaknesses:

1. There is a lack of accounting personnel with the requisite knowledge of Generally Accepted Accounting Principles in the U.S. ("GAAP") and the financial reporting requirements of the U.S. Securities and Exchange Commission;

2. There are insufficient written policies and procedures to ensure the correct application of accounting and financial reporting with respect to the current requirements of GAAP and SEC disclosure requirements; and

3. There is a lack of segregation of duties, in that the Company only had one person performing all accounting-related duties.

Notwithstanding the existence of these material weaknesses in the Company's internal control over financial reporting, the Company's management believes that the consolidated financial statements included in its reports fairly present in all material respects the Company's financial condition, results of operations and cash flows for the periods presented.

Internal Control Remediation Efforts. Management expects to remediate the three material weaknesses identified above as follows:

1. Management has leveraged and will continue to leverage experienced consultants to assist with ongoing GAAP and U.S. Securities and Exchange Commission compliance requirements. Additionally, management is actively looking to expand the accounting and finance function within the Company by hiring appropriate staff to resolve this material weakness in 2015.

2. Management has hired consultants to define and document the Company's internal control system including documenting policies over GAAP and SEC disclosure requirements. This material weakness is expected to be resolved in 2015.

3. Management has already taken steps to resolve this material weakness by hiring Robert Farrell as the Chief Financial Officer in 2014. Additionally, management believes that the remediation efforts surrounding the hiring of additional accounting and finance staff and the documenting the Company's internal controls and related policies will also assist with resolving this material weakness. Segregation of duties will be analyzed and adjusted Company-wide as part of the internal controls implementation that is expected to conclude in 2015.

This annual report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permits us to provide only management's report in this annual report.

Changes in Internal Control over Financial Reporting. There were no changes in our internal control over financial reporting that occurred during the fourth quarter of the year ended December 31, 2014 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

On April 2, 2015, the Company filed an amended and restated Certificate of Designation of its Series E Preferred Stock (The "Amendment"). The Amendment increased the number of authorized Series E Preferred Stock from 7,779 to 13,335 and changed the conversion price for the Series E Preferred Stock from $0.08 to $0.05, subject to adjustments, provided no adjustments shall be made until October 31, 2015

The Amendment also provides that simultaneously with the consummation of a Qualified Public Offering (defined in the Amendment as a public offering for gross proceeds of at least $10,000,000 and listing on a national securities exchange) each share of outstanding Series E Preferred Stock, together with any unpaid Dividends shall be converted into shares of Common Stock of the Company subject to adjustments at a conversion price per share of Series E Preferred Stock equal to the lower of $0.05 or 85% of the public offering price of the Qualified Public Offering ("Mandatory Conversion Price"). In addition, 30% (25% if no warrants are sold to the public in the Qualified Public Offering) of the Stated Amount of the outstanding Preferred Stock together with any Make-Whole Amount shall, at the Company's option, in whole or in part, be paid in cash or in shares of common stock priced at the Mandatory Conversion Price.

As consideration for the agreeing to the Amendment, the existing Series E Preferred Shareholders received, an aggregate of 30,000,000 shares of common stock pro rata to the Stated Value of Series E Preferred Stock then held by each holder.

PART III

Item 10. Directors, Executive Officers, and Corporate Governance.

The following information sets forth the names, ages, and positions of the Company's current directors and executive officers:

Name	Age	Office(s) held
Gerald E. Commissiong	32	President and Chief Executive Officer, Director
Dr. John W. Commissiong	70	Chief Scientific Officer, Director
Robert Farrell	65	Chief Financial Officer
Marc E. Faerber	60	Controller, Vice President of Financial Operations, Treasurer, Secretary
Robert L. Harris	71	Director
Dr. David A. Lowe	68	Director
Donald D. Huffman	68	Director
Iain Gladstone Ross	61	Director
Joseph Rubinfeld, Ph.D.	82	Director

Set forth below is a brief description of the background and business experience of each of our current executive officers and directors.

Gerald E. Commissiong, Chief Executive Officer, President, Director

Mr. Commissiong has served as the Chief Operating Officer and a Director of Amarantus since April of 2011. On October 23, 2011, Mr. Commissiong was appointed to serve as the Company's Chief Executive Officer and President. Mr. Commissiong was the co-founder and President and Chief Executive Officer of Amarantus, which was formerly known as CNS Protein Therapeutics, Inc. He played a significant role in sourcing the seed funding for the Company in 2008, assisted in developing a strategic corporate development pathway that involved the recruitment of relevant expertise, identification of appropriate development strategy, liaising with expertise to define development pathway, creation of a technological mitigation strategy and the identification of appropriate funding partners with a strategic interest in the Company's technology. Mr. Commissiong also recruited senior executives to the Board to guide the Company's growth and generated its official marketing materials, including investor brochures, corporate handouts, email newsletters and other materials necessary to raise awareness of the company. Prior to co-founding Amarantus, Mr. Commissiong played professional football for the Calgary Stampeders of the Canadian Football League. Mr. Commissiong holds a B.S. degree in Management Science and Engineering with a focus on Financial Decisions from Stanford University. Mr. Commissiong is qualified to serve as Director because of his history with the Company and

his management and leadership qualities. In addition, Mr. Commissiong skills and knowledge of the financial markets makes him invaluable to the Company.

Dr. John W. Commissiong, Chief Scientific Officer, Director

Dr. Commissiong has served as the Chief Scientific Officer and a Director of Amarantus since co-founding the Company in 2008. From 2000 through 2008 Dr. Commissiong served as the CSO of Neurotrophics Inc & Prescient Neuropharma Inc. Dr. Commissiong has been focused on the discovery of novel neurotrophic factors for the treatment of neurodegenerative diseases as well as understanding the fundamental underlying biology of protoplasmic type-1 astrocytes that secrete neurotrophic factors. He was Chief of the Neural Transplantation Unit, NINDS-NIH, from 1989-94 where his research focused on identifying therapeutic approaches to spinal cord injury. Dr. Commissiong was Head of the Neurotrophic Factors Group, NINDS-NIH, from 1994-97 where he focused on developing technologies to systematically identify novel neurotrophic factors with applications for specific Central Nervous System disorders. He co-founded Prescient Neuropharma in 1999, and discovered MANF in 2003. MANF is currently in preclinical development for the treatment of Parkinson’s disease. The work pioneered by Dr. Commissiong has led to significant advancements in the field of astrocyte-neuron biology. Dr. Commissiong believes that a fundamental understanding of astrocyte-neuron interactions in the Central Nervous System will lead to a new generation of therapies to treat brain-related disorders.

Dr. Commissiong did his Postdoctoral work in the Lab Preclin Pharmac, NIMH-NIH, concentrating on the application of quadrupole mass spectrometry in the analysis of neurotransmitters. He holds a Ph.D. in Neurophysiology from the University of Southampton, a M.Sc. in Biochemical Pharmacology from the University of Southampton and a B.S. in Biology and Chemistry from the University of the West Indies.

Dr. Commissiong is qualified to serve as a Director because of his extensive experience in drug discovery, and research and his work in the field of astrocyte-neuron biology.

Robert Farrell, Chief Financial Officer

Mr. Farrell was appointed as the Company’s Chief Financial Officer effective April 1, 2014, Mr. Farrell served as Chief Financial Officer of Titan Pharmaceuticals from 1996 to 2008, and as President and CEO from 2008 to 2010. During his tenure at Titan Mr. Farrell was responsible for all SEC filings, fund raising, financial and tax planning strategies, mergers & acquisitions, corporate partnerships, licensing transactions and financial operations. Mr. Farrell most recently served as CFO at Sanovas, Inc. Mr. Farrell previously served as CFO, Corporate Group Vice President and General Counsel at Fresenius USA and Fresenius Medical Care. Mr. Farrell also previously served as the CFO for the Institute for One World Health in San Francisco and currently serves on the Board of Directors of Prime Genomics, Inc. Mr. Farrell holds a J.D. from the University of California's Hastings School of Law.

Marc E. Faerber, Controller, Treasurer, Secretary and Vice President of Operations

Mr. Faerber currently serves as our Controller, Treasurer, Secretary and Vice-President of Financial Operations and previously served as the Chief Financial Officer from May 2009 through March 2014. In addition, Mr. Faerber has worked as an independent business and financial advisor since 2001 to the present. In that capacity, he provides financial, business and strategic advisory services to various startup entities, including medical device, biotechnology, software and alternative energy related companies. His services and experience include facilitating startups in establishing appropriate internal controls, developing administrative procedural processes, writing and critiquing business plans and strategies, preparation of company presentations, short term financial operating plans, and long term strategic financial planning, assisting organizations with seeking financing and rendering advice in various negotiations related to merger and acquisitions, distribution rights, technology licensing and other business structural issues, and review and implementation of internal control structures in support of Sarbanes Oxley compliance. Mr. Faerber is a licensed CPA (Inactive) in California and was a Certified Valuation Analyst from 2004 through 2007. He holds a B.S. in Business Administration from Providence College and has done course work towards a M.S. in Taxation at Golden Gate University.

Robert L. Harris, Director

Mr. Harris has served as a member of the Board of Amarantus since December 2010. Mr. Harris is a retired Vice President of Environmental, Health, Safety, Technical and Land Services at Pacific Gas and Electric Company, where he worked from September 1972 to January 2007. He graduated from San Francisco State University in 1965 and received his Juris Doctor degree from the University of California School of Law at Berkeley (Boalt Hall) in 1972. He was admitted to the California State Bar in December 1972 and argued and won a case in the United States Supreme Court in 1985. Harris also completed the Harvard Graduate School of Business Advanced Management Program and the Management Development Program at Duke University's School of Business. For five years, Harris was selected by Ebony magazine as one of the "100 Most Influential Blacks in America" (1980, 1992, 1993, 1994 and 1995). Mr. Harris is qualified to serve as a Director because of his extensive experience as a business executive and his legal background.

Dr. David A. Lowe, Director

Dr. Lowe jointed the Board in November 2013. Dr. Lowe is President & CEO of NeuroAssets, Sarl, a Swiss-based neuroscience-focused consulting firm, providing advisory services to pharmaceutical, venture capital and biotechnology companies throughout the world. Dr. Lowe previously served as the Chief Scientific Officer of Psychogenics, Inc. and before that as Director and Chief Scientific Officer of Memory Pharmaceuticals, Inc., a biotechnology company pursuing innovative treatments for Alzheimer's and Schizophrenia. Prior to Memory Pharmaceuticals, Dr. Lowe served as the Executive Vice President and Chief Scientific Officer at Fidelity Biosciences Group, Fidelity Investments in Boston, MA, an investment firm focused on the healthcare industry. He also served as President, CEO and Director of Envivo Pharmaceuticals, a Fidelity-funded pharmaceutical company pursuing new treatments for Alzheimer's disease now in Phase 3 development. Dr. Lowe also served as Vice-President and Therapeutic Area Head, Central Nervous System, at Roche Pharmaceuticals, Vice President& Global Therapeutic Area Head of Central Nervous System Research at Bayer AG., and Head of CNS Biology and Deputy Head of CNS Research at Sandoz Ltd (now Novartis). Dr. Lowe received his PhD in neurobiology from the University of Leeds, UK. Dr. Lowe is qualified to serve as Director because of his experience working in the pharmaceutical and drug industries and his scientific background.

Donald D. Huffman, Director

Mr. Huffman has served as a director of the Company since July 22, 2014 and serves on the board of two other companies. In March 2015, Mr. Huffman became a member of the board of directors of SteadyMed LTD. (STDY – NASDAQ) and has served on the board of Dance BioPharma, Inc., since July 2013. From September 2010 to March 2012, Mr. Huffman served as the Chief Financial Officer of Wafergen Biosystems Inc., a publicly-held emerging genomic analysis company and was its Co-President from September 2011 to March 2012. From October 2008 to September 2010, Mr. Huffman served as the Chief Financial Officer of Asante Solutions, Inc., a medical device company with an approved wearable insulin pump. From July 2006 to October 2008, Mr. Huffman served as Chief Financial Officer of Guava Technologies, Inc., a life science instrumentation company acquired by Millipore Corporation and then Merck & Co., Inc. From October 2004 to July 2006, Mr. Huffman served as Chief Financial Officer and principal of Sanderling Ventures, a biomedical venture capital firm. Mr. Huffman also has served as the Chief Financial Officer of three other public companies: Volcano Corporation (formerly known as EndoSonics Corporation), a company that manufactures medical devices; Microcide Pharmaceuticals, Inc., a biopharmaceutical company; and Celtrix Pharmaceuticals, Inc., a company that developed novel therapeutics for the treatment of debilitating, degenerative conditions, which was acquired by Insmed Incorporated in 2000. Mr. Huffman earned a B.S. in Mineral Economics from Pennsylvania State University and an M.B.A. from the State University of New York at Buffalo. He completed the Financial Management Program at the Stanford University Graduate School of Business. Mr. Huffman is qualified based on his extensive financial background primarily focused in the life sciences.

Iain Gladstone Ross, Director

Mr. Ross has served as a director of the Company since August 29, 2014. Following a career with multi-national companies including Sandoz, Fisons plc and Hoffman La Roche, Mr. Ross joined the Board of Celltech Group plc in 1991 and was responsible for building Celltech Biologics, the contract manufacturing division which was later sold to Alusuisse Lonza. For the last 18 years he has undertaken a number of start-ups and development stage companies as a board member on behalf of private equity groups and banks, including Quadrant Healthcare plc, Allergy Therapeutics Ltd, Eden Biodesign Ltd, Phadia AB and Silence Therapeutics plc. Currently Mr. Ross is Chairman of the Board of Premier Veterinary Group plc and Biomer Technology Ltd, and is also a Non-Executive Director of Benitec Biopharma Limited, Anatara Lifesciences Limited and Tissue Therapies Ltd each of which is traded on the Australian Securities Exchange. He is a Qualified Chartered Director of the UK Institute of Directors and Vice Chairman of the Council of Royal Holloway, University of London. Mr. Ross is qualified to serve as director because of his extensive experience working with a mix of biotech and large pharmaceutical companies.

Dr. Joseph Rubinfeld, Director

Dr. Rubinfeld has served as a director of the Company since December 5, 2014. Dr. Rubinfeld is currently a Board member of Regenicin, Inc. and CytRx Corporation. Earlier in his career, Dr Rubinfeld served 12 years at Bristol

Myers, where in addition to developing Amoxicillin and Cephadroxil, he was instrumental in licensing their original anti-cancer line of products, including Mitomycin, Etoposide, and Bleomycin. Dr. Rubinfeld is also credited with making a major scientific and public health contribution to society by inventing the first ever synthetic biodegradable detergent. In 1980, Dr. Rubinfeld was one of four co-founders of Amgen, Inc. and served as its Chief of Operations, where one of his primary efforts was the prioritization of erythropoietin (EPO) in Amgen's pipeline due to its initial commercialization pathway under the Orphan Drug Act. In 1984, Dr. Rubinfeld won the prestigious Common Wealth Award for Science and Invention, which was a testament to his prowess for achieving major inventions, represented by the numerous patents obtained during his distinguished career. In 1991 he co-founded SuperGen, Inc., where he served as President and Chief Executive Officer until 2003 and as a Board member until 2005. He has also served as an advisor or Board member to a number of companies including AVI BioPharma and Quark Pharmaceuticals. Dr. Rubinfeld received a B.S. degree in chemistry from C.C.N.Y. and M.A. and Ph.D. in chemistry from Columbia University. Dr. Rubinfeld is qualified to serve as Director because of business and scientific experience working in the pharmaceutical and drug industries.

Family Relationships

There are no family relationships between or among the directors, executive officers or persons nominated or chosen by the Company to become directors or executive officers, except that two of the Company's officers and directors, Dr. John Commissiong and Gerald Commissiong, are father and son.

Involvement in Certain Legal Proceedings

To our knowledge, our directors and executive officers have not been involved in any of the following events during the past ten years:

- any bankruptcy petition filed by or against such person or any business of which such person was a general partner or executive officer either at the time of the bankruptcy or within two years prior to that time;
- any conviction in a criminal proceeding or being subject to a pending criminal proceeding (excluding traffic violations and other minor offenses);
- being subject to any order, judgment, or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction, permanently or temporarily enjoining him from or otherwise limiting his involvement in any type of business, securities or banking activities or to be associated with any person practicing in banking or securities activities;
- being found by a court of competent jurisdiction in a civil action, the SEC or the Commodity Futures Trading Commission to have violated a Federal or state securities or commodities law, and the judgment has not been reversed, suspended, or vacated;
- being subject of, or a party to, any Federal or state judicial or administrative order, judgment decree, or finding, not subsequently reversed, suspended or vacated, relating to an alleged violation of any Federal or state securities or commodities law or regulation, any law or regulation respecting financial institutions or insurance companies, or any law or regulation prohibiting mail or wire fraud or fraud in connection with any business entity; or
- being subject of or party to any sanction or order, not subsequently reversed, suspended, or vacated, of any self-regulatory organization, any registered entity or any equivalent exchange, association, entity or organization that has disciplinary authority over its members or persons associated with a member.

Corporate Governance

Committees of the Board

Robert Harris, Donald Huffman, Iain Ross and Joseph Rubinfeld serve on the Compensation Committee of the Board, with Ian Ross serving as the Chairman. Our Compensation Committee assists the Board in discharging its responsibilities relating to executive compensation, succession planning for the Company's executive team, and to review and make recommendations to the Board regarding employee benefit policies and programs, incentive compensation plans and equity-based plans.

Robert Harris, Donald D. Huffman, Iain Ross and Joseph Rubinfeld serve on the Governance and Nominating Committee of the Board, with Mr. Harris serving as the Chairman. The Nominating and Corporate Governance Committee is responsible for overseeing the appropriate and effective governance of the Company, including, among other things, (a) nominations to the Board of Directors and making recommendations regarding the size and composition of the Board of Directors and (b) the development and recommendation of appropriate corporate governance principles.

Our audit committee consists of Donald D. Huffman, Robert Harris, Ian Ross and Joseph Rubinfeld, each of whom is a non-employee director. Mr. Donald Huffman is the chairperson of our audit committee. Our board of directors has determined that each member designee of our audit committee is an independent director as defined by Rule 10A-3 promulgated by the SEC pursuant to the Securities Exchange Act of 1934, as amended and meets the requirements of financial literacy under SEC rules and regulations. Mr. Huffman serves as our audit committee financial expert, as defined under SEC rules.

Our audit committee is responsible for, among other things:

- selecting and hiring our independent auditors, and approving the audit and non-audit services to be performed by our independent auditors;
- evaluating the qualifications, performance and independence of our independent auditors;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to financial statements or accounting matters;
- reviewing the adequacy and effectiveness of our internal control policies and procedures;
- discussing the scope and results of the audit with the independent auditors and reviewing with management and the independent auditors our interim and year-end operating results; and
- preparing the audit committee report that the SEC requires in our annual proxy statement.

Our board of directors has adopted a written charter for our audit committee, which is available on our website (www.amarantus.com).

Code of Ethics

We have adopted a written code of ethics, the Code of Business Conduct and Ethics, which applies to all of our directors, officers (including our chief executive officer and chief financial officer) and employees. Our Code of Business Conduct and Ethics is available on our website (www.amarantus.com).

Board Leadership Structure and Role in Risk Oversight

We have not adopted a formal policy on whether the Chairman and Chief Executive Officer positions should be separate or combined. The Board of Directors does not currently have a Chairman.

Our Board of Directors is primarily responsible for overseeing our risk management processes. The Board of Directors receives and reviews periodic reports from management, auditors, legal counsel, and others, as considered appropriate regarding our Company's assessment of risks. The Board of Directors focuses on the most significant risks facing our company and our Company's general risk management strategy, and also ensures that risks undertaken by our Company are consistent with the Board's appetite for risk. While the Board oversees our Company, our Company's management is responsible for day-to-day risk management processes. We believe this division of responsibilities is the most effective approach for addressing the risks facing our Company and that our Board leadership structure supports this approach.

Item 11. Executive Compensation.

Summary Compensation Table

The table below summarizes all compensation awarded to, earned by, or paid to each named executive officer for the Company's last two completed fiscal years for all services rendered to the Company.

SUMMARY COMPENSATION TABLE

Name and principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)	Option Awards ($)	Non-Equity Incentive Plan Compensation ($)	Nonqualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Gerald E. Commissiong, President, Chief Executive Officer	2014	170,625	50,000	__	438,000	__	__	__	658,625
	2013	-	230,111	18,250	-	-	-	-	248,361
Dr. John W. Commissiong, Chief Scientific Officer	2014	126,000	—	__	__	__	__	__	126,000
	2013	—	213,763	—	—	—	—	—	213,763
Marc Faerber, Treasurer, VP of Finance & Operations, and Secretary (1)	2014	138,333	—	__	123,400	__	__	__	261,733
	2013	260,951	—	10,480	—	—	—	—	271,431
Robert Farrell, Chief Financial Officer (2)	2014	150,001,	25,000	__	619,600	__	__	__	794,601

(1) Mr. Faerber has released the Company from obligations to pay $276,000 of accrued compensation as of December 31, 2013.
(2) Mr. Farrell was hired by the Company in April 2014.

Outstanding Equity Awards at Fiscal Year-End

The table below summarizes all unexercised options, stock that has not vested, and equity incentive plan awards for each named executive officer as of December 31, 2014.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END TABLE

	OPTION AWARDS							STOCK AWARDS			
Name	Number of Securities Underlying Unexercised Options (#) Exercisable		Number of Securities Underlying Unexercised Options (#) Unexercisable		Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Shares of Stock That Have Not Vested (#)	Market Value of Shares or Shares of Stock That Have Not Vested ($)	Equity Incentive Plan Awards: Number of Unearned Shares, Shares or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Shares or Other Rights That Have Not Vested (#)
Gerald E. Commissiong, President and Chief Executive Officer, Director	269,329	(1)	-	(1)	-	$ 0.0237 (1)	4/10/21(1)	-	-	-	-
			5,000,000		-	0.0916 (1)	9/22/24(1)				
	803,268	(2)	167,982	(2)	-	$ 0.225 (2)	7/15/22(2)				
						$ 0.7000 (2)	11/4/22(2)				
Dr. John W. Commissiong, Chief Scientific Officer, Director	131,557	(1)	-	(1)	-	$ 0.0237 (1)	4/10/21(1)	-	-	-	-
	581,172	(2)	116,328	(2)		$ 0.225 (2)	7/15/22(2)				
						$ 0.7000 (2)	11/4/22(2)				

Marc E. Faerber, Treasurer, VP of Finance & Operations, and Secretary	1,000,000	(1)	-	(1)	-	0.1235	(1)	7/11/24(1)	-	-	-	-
	399,609	(2)	87,891	(2)		$0.225	(2)	7/15/22(2)				
						$0.700	(2)	11/4/22(2)				
Robert Farrell, Chief Financial Officer	4,978,571	(1)	3,021,429	(1)		$0.0775	(1)	3/31/24(1)				

(1) Common stock shares

(2) Preferred stock shares

Director Compensation

The following summary compensation table sets forth all compensation awarded to, earned by, or paid to the named directors by the Company during the year ended December 31, 2014.

DIRECTOR COMPENSATION TABLE

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($)	Non-Equity Incentive Plan Compensation ($)	Non-Qualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Robert L. Harris	32,500	-	-	-	-	-	32,500
Dr. Mark Benedyk	15,000						15,000
Dr. David A. Lowe	20,000	-	322,000	-	-	-	342,000
Donald Huffman	16,359		29,180				45,539
Iain Ross	12,000		24,380				36,380
Dr. Joseph Rubinfeld	5,000		16,980				21,980

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

The following table sets forth the beneficial ownership of the Company's capital stock by each executive officer and director, by each person known by the Company to beneficially own more than five percent (5%) of any class of stock and by the executive officers and directors as a group. Except as otherwise indicated, all shares of common stock are owned directly and the percentage shown is based on shares of common Stock issued and outstanding as of March 25, 2015. As used in this table, "beneficial ownership" means the sole or shared power to vote, or to direct the voting of, a security, or the sole or shared investment power with respect to a security (i.e., the power to dispose of, or to direct the disposition of, a security). In addition, for purposes of this table, a person is deemed, as of any date, to have "beneficial ownership" of any security that such person has the right to acquire within 60 days after such date. Except as otherwise notice, the address of each officer and director listed is c/o of the Company at 655 Montgomery Street, Suite 900, San Francisco, CA 94111.

Title of class	Name and address of beneficial owner	Amount of beneficial ownership		Percent of class(1)	
Current Executive Officers & Directors:					
Common Stock	Gerald E. Commissiong	8,776,783	(2)	0.87	%
Common Stock	Dr. John W. Commissiong	20,464,636	(3)	2.02	%
Common Stock	Robert Farrell	3,550,000	(4)	0.00	%

Common Stock	Marc Faerber	2,286,625	(5)	0.23	%
Common Stock	Robert L. Harris	11,664,289	(6)	1.15	%
Common Stock	Dr. David A. Lowe	300,000	(7)	0.00	%
Common Stock	Donald D. Huffman	740,833	(8)	0.00	%
Common Stock	Iain G. Ross	690,833	(9)	0.00	%
Common Stock	Dr. Joseph Rubinfeld	2,872,334	(10)	0.00	%
Total of All Officers and Directors:		51,356,333		5.03	%
5% Beneficial Owners:					
Common Stock	Nerveda LLC	80,872,123		7.41	%

(1) Based on 1,010,944,785 shares of our common stock outstanding as of March 25, 2015.

(2) Includes: (i) 263,329 shares of common stock underlying an option to purchase shares at a price of $0.0237 per share which are exercisable within the next 60 days; (ii) 350,000 shares of common stock which are issuable upon conversion of 350,000 shares of Series C Convertible Preferred stock; and (iii) 138,889 shares of common stock which are issuable upon exercise of outstanding warrants.

(3) Includes: (i) 131,557 shares underlying an option to purchase shares at a price of $0.0237 which are exercisable within the next 60 days; (ii) 200,000 shares of common stock which are issuable upon conversion of 200,000 shares of Series C Convertible Preferred Stock; and (iii) 138,889 shares of common stock which are issuable upon exercise of outstanding warrants.

(4) Includes: 1,750,000 shares underlying an option to purchase shares at a price of $0.0775 which are exercisable within the next 60 days.

(5) Includes: (i) 3,416,667 shares underlying an option to purchase shares at a price of $0.1235 which are exercisable within the next 60 days; and (ii) 200,000 shares of common stock issuable upon conversion of 200,000 shares of Series C Convertible Preferred stock.

(6) Includes: (i) 50,000 shares underlying an option to purchase shares at a price of $0.0892 which are exercisable within the next 60 days; (ii) 138,889 shares of common stock which are issuable upon exercise of outstanding warrants; and (iii) 1,359,375 shares which are owned by Mr. Harris' spouse.

(7) Includes: 300,000 shares of common stock underlying options to purchase 200,000 and 100,000 shares, at a price of $0.050 and $0.0892 per share respectively, within the next 60 days.

(8) Includes: 740,833 shares of common stock underlying an options to purchase 166,667 and 574,166 shares, at a price of $0.1460 and $0.0892 per share respectively, within the next 60 days.

(9) Includes: 690,833 shares of common stock underlying an options to purchase 150,000 and 540,833 shares, at a price of $0.1220 and $0.0892 per share respectively, within the next 60 days.

(10) Includes: (i) 607,500 shares underlying an option to purchase shares at a price of $0.0892 which are exercisable within the next 60 days; and (ii) 208,334 shares of common stock which are issuable upon exercise of outstanding warrants.

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

On November 6, 2013, the Company announced the appointment of David A. Lowe, Ph.D. to its Board of Directors. Dr. Lowe is President & CEO of NeuroAssets, Sarl, a Swiss-based neuroscience-focused consulting firm, providing advisory services to pharmaceutical venture capital and biotechnology companies throughout the world. NeuroAssets has been providing consulting services to the Company since April 2012.

On March 2, 2015, the Company loaned MedicoRx, Inc. $25 in an unsecured convertible promissory note. Joseph Rubinfeld is President and CEO and also a Board Member of Amarantus. The note provided the Company with first right of refusal on any additional investments, but there are no further obligations beyond the $25.

Director Independence

When applying the definition of independence set forth in Rule 4200(a)(15) of The Nasdaq Stock Market, Inc., the Company believes that Robert L. Harris , Donald D. Huffman, Iain G. Ross, and Dr. Joseph Rubinfeld, are independent directors.

Item 14. Principal Accounting Fees and Services

The following table sets forth fees billed to us by our independent auditors for the years ended 2014 and 2013 for (i) services rendered for the audit of our annual financial statements and the review of our quarterly financial statements, (ii) services rendered that are reasonably related to the performance of the audit or review of our financial statements that are not reported as Audit Fees, and (iii) services rendered in connection with tax preparation, compliance, advice and assistance. All services are approved and pre-approved by the audit committee.

SERVICES	2014	2013
Audit fees	$283,287	$50,250
Audit-related fees		-
Tax fees	41,009	-
All other fees	40,382	-
Total fees	$364,678	$50,250

PART IV

Item 15. Exhibits, Financial Statements Schedules.

Exhibit No.	Description
3.1	Articles of Incorporation of Amarantus BioScience, Inc. filed with the Secretary of State of Nevada on March 22, 2013.Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed April 1, 2013.
3.2	Certificate of Amendment to Certificate of Incorporation. Incorporated by reference to Current Report on Form 8-K filed October 14, 2011.
3.3	Certificate of Amendment to the Certificate of Incorporation. Incorporated by reference to Current Report on Form 8-K filed November 14, 2012.
3.4	Certificate of Designation of Series B Preferred Stock filed with the Secretary of State on April 2, 2013. Incorporated by reference to the Company's Current Report on Form 8-K filed April 4, 2013.
3.5	Bylaws. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed April 1, 2013
3.6	Certificate of Amendment to Certificate of Incorporation-Delaware. Incorporated by reference to Current Report on Form 8-K filed November 27, 2012.
3.7	Certificate of Designation of Series D Preferred Stock filed with the Secretary of State on June 30, 2014. Incorporated by reference to the Company's Current Report on Form 8-K filed on July 7, 2014.
3.8	Certificate of Amendment to Certificate of Designation of Series E Preferred Stock filed December 19, 2014. Incorporated by reference to the Company's Current Report on Form 8-K filed on December 24, 2014.
3.9	Agreement and Plan of Merger, dated January 8, 2015, by and among Amarantus Bioscience Holdings, Inc., DioGenix, Inc., Neuro Acquisition Corporation and Nerveda, LLC, as Security holder

	Representative. Incorporated by reference to the Company's Current Report on Form 8-K filed on January 13, 2015.
3.10	Certificate of Amendment to Certificate of Designation of Series E Preferred Stock filed January 13, 2014. Incorporated by reference to the Company's Current Report on Form 8-K filed on January 14, 2015.
4.1	Senior Secured Convertible Promissory Note Agreement dated December 28, 2010. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K/A filed June 3, 2011
4.2	Form of Rights Agreement, Form of Certificate of Designations, Form of Right Certificate, and the Form of Summary of Rights to Purchase Preferred Shares. Incorporated by reference to Current Report on Form 8-K filed December 28, 2012.
10.1	Second Amendment to Senior Secured Convertible Promissory Note Agreement. Incorporated by reference to Current Report on Form 8-K/A filed June 3, 2011.
10.2	Convertible Promissory Note Agreement as amended on March 23, 2011. Incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.3	Note and Warrant Purchase Agreement – Molecular Medicine Research Institute Incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K/A filed June 3, 2011.

10.4	Sponsored Research Agreement. Incorporated by reference to Exhibit 10.5 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.5	Note and Warrant Purchase Agreement – The Parkinson's Institute. Incorporated by reference to Exhibit 10.6 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.6	Promissory Note – Neurotrophics, Inc. Incorporated by reference to the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.7	Intellectual Property Assignment Incorporated by reference to Exhibit 10.8 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.8	Data Transfer Agreement Incorporated by reference to Exhibit 10.9 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.9	Consulting Agreement with Keelin Reeds Partners Incorporated by reference to Exhibit 10.10 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.10	Executive Services Agreement, as amended. Incorporated by reference to Exhibit 10.11 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.11	Sublease Incorporated by reference to Exhibit 10.12 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.12	MJFF Research Grant Terms and Conditions Incorporated by reference to Exhibit 10.13 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.13	2008 Stock Plan. Incorporated by reference to Exhibit 10.14 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.14	Letter of Agreement with Argot Partners, LLC Incorporated by reference to Exhibit 10.15 of the Company's Current Report on Form 8-K/A filed June 3, 2011.
10.15	Consent to Assignment between Juvaris BioTherapeutics, Inc. and the Company dated May 31, 2011. Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K filed June 15, 2011
10.16	Lease Agreement, as amended – Juvaris BioTherapeutics, Inc. Incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K filed June 15, 2011
10.17	Note Purchase Agreement – Samuel Herschkowitz. Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K filed October 3, 2011
10.18	Promissory Note dated October 4, 2011 issued by the Company to Samuel Herschkowitz. Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K filed October 3, 2011
10.19	Letter Agreement regarding Pledged Shares between the Company and Samuel Herschkowitz. Incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K filed October 3, 2011.
10.20	Exclusive License Agreement between Power 3 Medical Products, Inc. and the Company dated January 18, 2012. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed January 30, 2012
10.21	Convertible Promissory Note issued November 14, 2012 to Dominion Capital, LLC Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed on November 14, 2012.
10.22	Exclusive License Agreement, effective December 14th, 2012, by and between Amarantus Biosciences and Memory Dx, LLC. Incorporated by reference to Current Report on Form 8-K filed December 12, 2012.
10.23	Bill of Sale, dated December 19, 2012, by and between Lowell T. Cage, as the chapter 7 Trustee for Power3 Medical Products, Inc. and Amarantus Biosciences, Inc. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed December 26, 2012
10.24	Order Authorizing Sales of Intellectual Property Free and Clear of Liens, Claims and Encumbrances, dated December 17, 2012. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed December 26, 2012.
10.25	Copy of Letter of Intent between Amarantus BioScience, Inc. and Brewer Sports International, LLC dated as of December 28, 2012. Incorporated by reference to Current Report on Form 8-K filed December 31, 2012.
10.26	

	Amendment No 1 to Convertible Promissory Note issued to Dominion Capital, LLC. Incorporated by reference to Exhibit 10.32 to the Company's annual report on Form 10-K filed on April 18, 2013.
10.27	Amendment No. 2 to Convertible Promissory Note issued to Dominion Capital, LLC. Incorporated by reference to Exhibit 10.33 to the Company's annual report on Form 10-K filed on April 18, 2013.
10.28	Amended and Restated Convertible Promissory note - issued to Dominion Capital, LLC in the principal amount of $375,000. Incorporated by reference to Exhibit 10.34 to the Company's annual report on Form 10-K filed on April 18, 2013.

10.29	Securities Purchase Agreement dated September 3, 2013. Incorporated by reference to the Company's Form 8-K filed September 9, 2013.
10.30	Form of 8% Original Issue Discount Senior Convertible Debenture due September 6, 2014. Incorporated by reference to the Company's Form 8-K filed September 9, 2013.
10.31	Form of Registration Rights Agreement entered into in connection with the Securities Purchase. Incorporated by reference to the Company's Form 8-K filed September 9, 2013. Agreement dated September 3, 2013 and October 2, 2013 dated September 3, 2013
10.32	Form of Common Stock Purchase entered into in connection with the Securities Purchase Agreement dated September 3, 2013 and October 2, 2013 Warrant. Incorporated by reference to the Company's Form 8-K filed September 9, 2013.
10.33	Form of Subsidiary Guarantee entered into in connection with Securities Purchase Agreement dated September 3, 2013 and October 2, 2013. Incorporated by reference to the Company's Registration Statement on Form S-1 filed on December 2, 2013
10.34	Securities Purchase Agreement dated October 2, 2013. Incorporated by reference to the Company's Registration Statement on Form S-1 filed on December 2, 2013
10.35	Form of 8% Original Issue Discount Senior Convertible Debenture due October 2, 2014. Incorporated by reference to the Company's Registration Statement on Form S-1 filed on December 2, 2013
10.36	Amendment No. 1 to Registration Rights Agreement dated October 2, 2013. Incorporated by reference to the Company's Registration Statement on Form S-1 filed on December 2, 2013.
10.37	Option Agreement between the Company and the University of Miami dated November 27, 2013. Incorporated by reference to the Company's Annual Report on Form 10-K filed on April 21, 2014.
10.38	Exclusive License Agreement between the Company and the University of Massachusetts date December 12, 2013 Incorporated by reference to the Company's Annual Report on Form 10-K filed on April 21, 2014.
10.39	Demand Promissory Note issued to Dominion Capital LLC. Incorporated by reference to the Company's Annual Report on Form 10-K filed on April 21, 2014.
10.40	Option Agreement with the University of Massachusetts dated as of February 28, 2014. Incorporated by reference to the Company's Annual Report on Form 10-K filed on April 21, 2014.
10.41	Purchase Agreement, dated as of March 7, 2014, by and between the Company and Lincoln Park Capital Fund, LLC. Incorporated by reference to Exhibit 10.1 to the Company's current report on Form 8-K filed March 13, 2014.
10.42	Registration Rights Agreement dated as of March 7, 2014, by and between the Company and Lincoln Park Capital Fund, LLC. Incorporated by reference to Exhibit 10.2 to the Company's current report on Form 8-K filed March 13, 2014.
10.43	Asset Purchase Agreement between Amarantus Bioscience Holdings, Inc. and Memory DX, LLC dated as of April 29, 2014. Incorporated by reference to Exhibit 10.1 to the Company's quarterly report on Form 10-Q filed with the SEC on May 20, 2014.
10.44	Asset Purchase Agreement between Amarantus Bioscience Holdings, Inc. and Provista Diagnostics, Inc. entered into as of May 1, 2014. Incorporated by reference to Exhibit 10.2 to the Company's quarterly report on Form 10-Q filed with the SEC on May 20, 2014.
10.45	Employment Letter, entered into by and between Gerald E. Commissiong and Amarantus Bioscience Holdings, Inc. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on October 10, 2014.
10.46	Form of Securities Purchase Agreement. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on November 14, 2014.
10.47	Option Agreement, dated November 7, 2014, by and between Amarantus Bioscience Holdings, Inc. and Lonza Walkersville. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on November 17, 2014.
10.48	

	Asset Purchase Agreement, dated November 7, 2014, by and among Amarantus Bioscience Holdings, Inc., Regenicin, Inc., Clark Corporate Law Group, LLP, and Gordon & Rees, LLP. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on November 17, 2014.
10.49	Consulting Agreement, dated November 1, 2014, by and between Amarantus Bioscience Holdings, Inc. and NeuroAssets SARL. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on November 24, 2014.
10.50	First Amendment to Option Agreement by and between Lonza Walkersville, Inc. and Amarantus Bioscience Holdings, Inc. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on January 12, 2015.

10.51	Offer Letter to Dr. John W. Commissiong dated December 31, 2014. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on January 12, 2015.
10.52*	Amendment to Asset Purchase Agreement by and among Regenicin, Inc., Clark Corporate Law Group, LLP, and Amarantus Bioscience Holdings, Inc.
10.53*	Second Amendment to Option Agreement by and between Lonza Walkersville, Inc. and Amarantus Bioscience Holdings, Inc.
10.54*	Certificate of Amendment to Certificate of Designation of Series E Preferred Stock filed April 2, 2015.
21.1*	List of Subsidiaries.
23.1*	Consent of Marcum LLP
31.1*	Certification of Chief Executive Officer pursuant to Rule 13a-14 of the Securities Exchange Act of 1934
31.2*	Certification of Chief Financial Officer pursuant to Rule 13a-14 of the Securities Exchange Act of 1934
32.1*	Certification of Chief Executive Officer pursuant to Section 1350
32.2*	Certification of Chief Financial Officer pursuant to Section 1350
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase
101.DEF*	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase

*Filed herewith.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMARANTUS BIOSCIENCE HOLDINGS, INC.

Date: April 3, 2015 By: */s/ Gerald E. Commissiong*
Name: Gerald E. Commissiong
Title: Chief Executive Officer

(Principal Executive Officer)

Date: April 3, 2015 By: */s/ Robert Farrell*
Name: Robert Farrell
Title: Chief Financial Officer

(Principal Financial and Accounting Officer)

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	**Position**	**Date**
/s/ Gerald E. Commissiong Gerald E. Commissiong	Chief Executive Officer (Principal Executive Officer), President, Director	April 3, 2015
/s/ Robert Farrell Robert Farrell	Chief Financial Officer (Principal Financial and Accounting Officer),	April 3, 2015
/s/ John W. Commissiong John W. Commissiong	Chief Scientific Officer, Director	April 3, 2015
/s/ Robert L. Harris Robert L. Harris	Director	April 3, 2015
/s/ *Marc E. Faerber* Marc E. Faerber	Controller, Treasurer, Vice President of Financial Operations, and Secretary	April 3, 2015

/s/ David Lowe David Lowe	Director	April 3, 2015
/s/ Donald Huffman Donald Huffman	Director	April 3, 2015
/s/ *Iain Ross* Iain Ross	Director	April 3, 2015
/s/ *Joseph Rubinfeld* Joseph Rubinfeld	Director	April 3, 2015