AtheroNova Inc.
Form 10-K
February 27, 2014

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-K

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

For the fiscal year ended December 31, 2013

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

For the transition period from _____ to _____.

Commission file number 000-52315

AtheroNova Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**20-1915083**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

2301 Dupont Drive, Suite 525, Irvine, CA 92612

(Address of principal executive offices and zip code)

(949) 476-1100

(Registrant's telephone number, including area code)

Securities registered under Section 12(b) of the Act:

None

Securities registered under Section 12(g) of the Exchange Act:

Common Stock, par value $0.001 per share

(Title of Class)

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes 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 registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, as of the last business day of the registrant’s most recently completed second fiscal quarter, was approximately $16,778,140.

As of February 17, 2014 there were 41,649,371 shares of the issuer’s common stock, $0.0001 par value per share, outstanding.

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains -"forward-looking statements". The forward-looking statements are only predictions and provide our current expectations or forecasts of future events and financial and operating performance and may be identified by the use of forward-looking terminology, including the terms "believes," "estimates," "anticipates," "expects," "plans," "intends," "may," "will" or "should" or, in each case, their negative, or other variations or comparable terminology, though the absence of these words does not necessarily mean that a statement is not forward-looking. Forward-looking statements include all matters that are not historical facts and include, without limitation statements concerning: our business strategy, outlook, objectives, future milestones, plans, intentions, goals, and future financial condition, including the period of time for which our existing resources will enable us to fund our operations; plans regarding our efforts to gain U.S. regulatory approval for our bile acid technology for the regression of atherosclerotic plaque deposits; the possibility, timing and outcome of submitting regulatory filings for our products under development; our research and development programs for our bile acid technology and other possible indications of the use of bile acid in reducing lipid deposits, including planning for and timing of any clinical trials and potential development milestones; the development of financial, clinical, licensing and distribution plans related to the potential commercialization of our drug products, if approved; and plans regarding potential strategic alliances and other collaborative arrangements with pharmaceutical companies and others to develop, license, manufacture and market our products.

Forward-looking statements are subject to many risks and uncertainties that could cause actual results to differ materially from any future results expressed or implied by the forward-looking statements. We caution you therefore against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Examples of the risks and uncertainties include, but are not limited to:

- risks related generally to our efforts to gain regulatory approval, in the United States and elsewhere, for our drug product candidates, including our lead compounds that we are developing to address atherosclerotic plaque regression and other possible applications of bile acid for the regression or dissolution of lipid deposits;
- the risk that we and the U.S. Food and Drug Administration (FDA) or other regulatory authorities will not be able to agree on matters raised during the regulatory review process, or that we may be required to conduct significant additional activities to potentially gain approval of our product candidates, if ever;
- the risk that the FDA or other regulatory authorities may not accept, or may withhold or delay consideration of, any applications that we may file, or may not approve our applications or may limit approval of our products to particular indications or impose unanticipated label limitations;
- risks relating to our research and development activities, which involve time-consuming and expensive preclinical studies and other efforts for which we depend on collaborative arrangements with commercial and academic entities, who may not complete activities on schedule or conduct such activities in accordance with regulatory requirements or our trial designs;
- risks relating to the transfer of our manufacturing technology to third-party contract manufacturers and assemblers;
- the risk that we, our licensing partners or any third-party suppliers may encounter problems or delays in manufacturing or assembling drug products, drug product substances, ancillary devices and related components and other materials on a timely basis or in an amount sufficient to support our development efforts and, if our products are approved, commercialization;

- the risk that we may be unable to identify potential strategic partners or collaborators with whom we can develop and, if approved, commercialize our products in a timely manner, if at all;
- the risk that we or our strategic partners or collaborators will not be able to attract or maintain qualified personnel;
- the risk that, if approved, market conditions, the competitive landscape or other factors may make it difficult to compete against competitive products and/or entities;
- the risk that we may not be able to raise additional capital or enter into strategic alliances or collaboration agreements (including strategic alliances for development, licensing or commercialization of our drug products);
- the risk that recurring losses, negative cash flows and the inability to raise additional capital could threaten our ability to continue as a going concern;
- the risks that we may be unable to maintain and protect the patents and licenses related to our products and that other companies may develop competing therapies and/or technologies;
- the risk that we may become involved in product liability and other litigation;
- risks related to reimbursement and health care reform that may adversely affect us; and
- other risks and uncertainties detailed in “Risk Factors.”

Pharmaceutical and biotechnology companies have suffered significant setbacks in advanced clinical trials, even after obtaining promising earlier trial results. Data obtained from such clinical trials are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. After gaining approval of a drug product, pharmaceutical companies face considerable challenges in marketing and distributing their products, and may never become profitable.

The forward-looking statements contained in this report or the documents incorporated by reference herein speak only of their respective dates. Factors or events that could cause our actual results to differ may emerge from time to time and it is not possible for us to predict them all. Except to the extent required by applicable laws, rules or regulations, we do not undertake any obligation to publicly update any forward-looking statements or to publicly announce revisions to any of the forward-looking statements, whether as a result of new information, future events or otherwise.

AtheroNova Inc.

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For the Fiscal Year Ended December 31, 2013

PART I

ITEM 1. BUSINESS.

CORPORATE HISTORY

AtheroNova Inc. is a Delaware corporation, with our principal offices located at 2301 Dupont Drive, Suite 525, Irvine, California. We were incorporated in Delaware in 1997. Our telephone number is (949) 476-1100 and our website address is www.atheronova.com. Our common stock is traded on the OTC Bulletin Board, where our symbol is AHRO.

On March 26, 2010, we entered into an Agreement and Plan of Merger with Z&Z Merger Corporation, a Delaware corporation and our wholly-owned subsidiary ("MergerCo"), and AtheroNova Operations, Inc., a Delaware corporation then known as Z&Z Medical Holdings, Inc. ("Z&Z Delaware"). At the closing of the merger on May 13, 2010, (i) MergerCo was merged with and into Z&Z Delaware (the "Merger"), whose name was concurrently changed to AtheroNova Operations, Inc. ("AtheroNova Operations"); (ii) Z&Z Delaware, as AtheroNova Operations, become our wholly-owned subsidiary; (iii) all of AtheroNova Operations' shares, warrants and options outstanding prior to the Merger were exchanged (or assumed, in the case of warrants and options) for comparable securities of our company; and (iv) approximately 98% of our fully-diluted shares (excluding the shares issuable in the Capital Raise Transaction described below) were owned by AtheroNova Operations' former stockholders, warrant holders and option holders.

As a result of the Merger we are solely engaged in AtheroNova Operations' business, AtheroNova Operations' officers became our officers and three of AtheroNova Operations' directors became members of our seven-member board of directors. Unless the context otherwise requires, all references to "we," "our," and the "Company" refer to AtheroNova Inc. and its wholly-owned subsidiary AtheroNova Operations, Inc.

BUSINESS OVERVIEW

We have developed intellectual property ("IP"), covered by our issued and pending patent applications, which uses certain pharmacological compounds uniquely for the treatment of atherosclerosis, which is the primary cause of various cardiovascular diseases. Atherosclerosis occurs when cholesterol or fats are deposited on arterial walls and form as plaques. Such deposits are theorized as occurring due to weaknesses or imperfections in the arterial walls.

Another theory is that these plaques develop at the site of arterial inflammations. Once the plaque has lodged on or in the arterial wall, additional deposits can build up due to the existence of areas of resistance in the path of blood flow from the walls of arteries. Such accumulations are known as atheromas. These atheromas can form a protective barrier known as a “fibrous cap.” These fibrous caps are thought to be the result of inflammation of the arterial wall from the formation of the deposit. The fibrous cap is a porous fiber which is an attempt to stabilize the deposit and prevent it from suddenly breaking loose. In some instances, the plaque still can rupture and greatly restrict or block altogether blood flow, resulting in such cardiac events as heart attack or stroke. Even if the plaque remains stable, it can lead to reduction of the space within the arteries through which blood can flow and cause such diseases as Peripheral Artery Disease, Kidney failure, Macular Degeneration and Hypertension.

Cholesterol deposits or “plaque” accumulate over the lifetime of an individual based on factors such as diet, heredity and other blood chemistry factors. The building block of the plaque accumulations is the amount of Low-density lipoprotein cholesterol, or “LDL,” contained in the blood circulating is a person’s body. The accepted medical opinion is that a higher LDL reading in a person’s blood chemistry can lead to plaque accumulations in the arteries. High-density-lipoprotein cholesterol, or “HDL,” is considered the “good” cholesterol and can assist in transporting the LDL out of the bloodstream to the digestive system and elimination from the body. Many different factors play into how much of each of these cholesterols make their way into the bloodstream and lead to possible plaque deposits. The generally accepted thinking in the medical community is that the plaque allowed to form and accumulate in the arteries will remain in the arteries indefinitely. Diet and exercise are the two most common factors cited by medical professionals in controlling the balance of HDL and LDL in hopes of minimizing the amount of plaque accumulation during a person’s lifetime.

This accumulated plaque has not been addressed by any current medical and drug technology, although many approaches and concepts have been tried. The most effective measure to date in the fight to prevent atherosclerosis has been the development of statin drugs. Statins work on the body’s ability to simultaneously decrease the LDL and increase the HDL in a patient’s blood. One of the drawbacks of statin drugs has been the tolerability of the drugs, both in the dosage prescribed as well as the long term exposure. Some liver functions must be tested on a periodic basis to insure that a patient’s liver is functioning normally.

Until several years ago the general belief was that a patient who exhibited the genetic, dietetic or disease characteristics prone to accumulations of plaque should be put on a course of lifestyle and diet changes in hopes of controlling blood cholesterol levels. If such changes did not lower cholesterol levels, then one of the statin drugs in the varying acceptable dose levels would be introduced with an expectation that once a patient was started on a statin drug, they would be a patient for life. Such prescription characteristics have made statin drugs the most successful drug family in the history of medicine.

Currently we have developed and manufactured the Active Pharmaceutical Ingredient ("API"), AHRO-001, needed to conduct toxicology studies and Phase 1 and 2 human clinical trials. Through an agreement completed in 2011, we have partnered with a Russian venture fund for the development of AHRO-001 for their territory including utilizing contract research organizations to conduct Phase 1 and 2 clinical trials in Russia. This partnership will help demonstrate the efficacy our API as first demonstrated in our pre-clinical studies conducted in 2009, 2010 and 2011. Our API uses naturally occurring bile acids normally found in a non-human digestive tract to activate genetic signaling mechanisms to act on the portions of the soft, vulnerable plaque that are accessible through the fibrous cap. This process breaks down plaque deposits into molecules small enough to pass safely through the fibrous cap without causing harm to the fibrous cap itself. The body then processes the cholesterol through the liver in the normal process of cholesterol metabolism. Additionally, our API also demonstrated an effect of lipid panel improvements of the test subjects during the active treatment phase of our pre-clinical studies. The research conducted in pre-clinical studies demonstrated the ability of bile acid to dissolve, or regress, a statistically significant portion of the atheromas induced in test subjects in a safe and effective manner in non-human subjects as well as improving lipid panel scores. Finally, our compound reduces the amount of intestinal cholesterol absorption in a similar fashion to ezetimibe. At the conclusion of these non-human studies, we determined that the results showed a superior regression model effective enough to take the next step in the development of the API for introduction into human clinical trials. A pre-Investigational New Drug meeting with the United States Food and Drug Administration ("FDA") in October 2011, established the necessary protocols and study designs for our Phase 1 and 2 clinical trials. If our premise is confirmed, then this would introduce the first clinically proven method to regress soft, vulnerable plaque. Such treatment, when tested, reviewed and approved by the varying government regulatory agencies worldwide, would offer the first treatment to the millions of patients currently undergoing treatment for atherosclerosis risk, as well as promise to those who have genetic, dietetic or disease predisposition to the potentially disastrous "first event" where the patient's only experience with an atherosclerotic event is a fatal heart attack or stroke. In 2013, we commenced the first-in-human Phase 1 clinical trial with our Russian partner using a randomized, double-blind, placebo controlled protocol with AHRO-001which enrolled and treated a total of 54 subjects. Enrollment, dosing and follow-up visits were concluded in 2013 and the data analysis is ongoing. We continue to develop and execute a portion of our clinical trial portfolio in Russia to enable our Russian partner's commercialization efforts in their territory.

An important priority is to secure strategic and financial resources to potentially maximize the inherent value of our IP surrounding the use of bile acids in medical applications. The first step in this strategy was the successful consummation of the research agreement with our Russian partner, OOO CardioNova ("CardioNova"), a wholly-owned subsidiary of the OOO Maxwell Biotech Group ("Maxwell"). This licensing agreement, which is for the Russian Federation and nine satellite countries only, is a critical first step in the development and potential worldwide commercialization of our IP. We would prefer to accomplish additional steps of our objectives through additional strategic alliances and selective licensing rights. Although we are actively engaged in discussions with potential strategic and/or financial partners, there can be no assurance that any strategic alliance or other financing transaction will be successfully concluded. Until such time as we secure sufficient strategic and financial resources to support the continuing development of our IP, and to support our operations, we will continue to conserve our resources, predominantly by pacing expenditures and research programs in our plan to develop a full line of IP surrounding the use of bile acids.

BUSINESS STRATEGY

Our goal is to develop a complete line of products based on our IP involving bile acid to address a number of medical conditions with the goal of introducing naturally occurring compounds to improve the medical conditions of those suffering from the effects of atherosclerosis caused by diabetes, heredity, poor diet and other plaque inducing states. Mortality and morbidity from the effects of atherosclerosis total in the billions of dollars each year for the United States healthcare system alone, with many times that for the worldwide market.

Our primary product goal is to develop AHRO-001 to address the disease of atherosclerosis. We have manufactured a significant quantity of our API necessary for use in clinical trials plus any requirements needed for toxicology testing. We have formulated and refined the oral administration tablet necessary to deliver our API to the ideal site in the digestive tract and continue to work on improvements and refinements to the formula. We are currently manufacturing drug product tablets to be used in our additional planned human clinical trials by our Russian development partner. The shipment of the tablets to be used in these additional clinical trials conducted there will be in the 2nd quarter of 2014 with the commencement of enrollment of patients during the 2nd half of 2014, pending regulatory approvals. The active treatment phase is planned to be for a period of twelve weeks and data should be available approximately 60-90 days following the last patient out. A successful completion of that trial will allow CardioNova to move forward with a clinical study intended to enable the possible drug registration application for commercial sale in its distribution territory.

Concurrently, we have a toxicology program in progress at a Good Laboratory Practices (“GLP”) registered facility to compile the data necessary for submission of an Investigational New Drug (“IND”) application with the United Stated Food and Drug Administration (“FDA”). By submitting the IND application, expected to be during 2014, we will be able to initiate clinical trials in the United States and other counties that follow FDA guidelines. We expect to conduct these trials concurrent with the development program being conducted by CardioNova with the intent of using data generated in multiple trials to support and expand AHRO-001.

Additionally, we continue to develop additional bile acid compounds for potential commercialization based on our current patent filings in the United States as well as foreign jurisdictions.

Our Industry

We compete against well-capitalized pharmacological companies as well as smaller companies. The market for our products is highly competitive as well as highly regulated. The pharmacological sector is evolving and growing rapidly, and companies are continually introducing new products and services. Many companies are exploring competing and complementary technologies. Pharmaceutical development is a cost intensive project with millions of dollars necessary to successfully develop, test and market compounds successfully. We expect to seek multiple financial or strategic financing opportunities in our development of our IP.

BUSINESS OPERATIONS

Research and Development

Our research and development activities are initially focused on the atherosclerosis regression potential of bile acids. We continually evaluate our research and development priorities in light of a number of factors, including our cash flow requirements and financial liquidity, the availability of third party funding, advances in technology, the results of ongoing development projects and the potential for development partnerships and co-development agreements. In connection with these evaluations, we modify and adapt our research and development plans from time to time and expect to do so in the future.

We are actively assessing various strategic and financial alternatives to secure necessary capital to advance our IP to maximize stockholder value, although we would prefer to accomplish our objectives through strategic alliances and licensing agreements that would provide financial support (potentially in the form of upfront payments, milestone payments, commercialization royalties and a sharing of research and development expenses), development capabilities, and ultimately commercial expertise to maximize the potential of our bile acid IP. We are reviewing various financial alternatives that would provide infusions of capital and other resources to advance our current API development programs. Although we are considering several potential opportunities, there can be no assurance that any strategic alliance or other financing alternatives will be successfully concluded. Until such time as we secure sufficient strategic and financial resources to support the continuing development of our IP technology and support

our operations, we will continue to conserve our resources, predominantly by curtailing and pacing investments in our development programs.

If we are able to secure the necessary capital, we also plan to invest opportunistically in bile acid IP addressing other health indications complimentary to our primary market of atherosclerosis regression, which we believe represent potentially significant market opportunities. We plan to initially develop these programs through a proof-of-concept phase and, if successful, thereafter determine whether to seek strategic alliances or collaboration arrangements or utilize other financial alternatives to fund their further development and/or worldwide commercialization, if approved. There can be no assurance, however, that we will succeed in demonstrating proof of concept or entering into any such alliance.

To support our research and development activities, we have:

- a medical advisory staff with expertise in cardiology and lipid sciences as well as consultants who are leading researchers in these fields;
- expertise in the design and implementation of protocols and guidelines for experiments and studies to support human drug development. We conduct certain development-related experiments and bench studies in-house and also engage professional research laboratories as well as academic and education centers to conduct animal and human studies and experiments requiring specialized equipment and expertise;
- regulatory consultants with expertise in FDA regulatory matters. We also consult extensively with independent FDA and international regulatory experts; and
- engineering expertise that supports development of novel molecules, conjugates and analogs of the existing compounds to strengthen our intellectual property position through work with third-party collaborators to advance the development of these compounds.

Research and development costs are charged to operations as incurred. During the years ended December 31, 2013 and 2012 and for the period from inception to December 31, 2013, our research and development expenses were $4,399,294, $986,261 and $6,258,630, respectively.

General and Administrative

We intend to continue investing in general and administrative resources primarily to support our intellectual property portfolios (including building and enforcing our patent and trademark positions), our business development initiatives, financial systems and controls, legal requirements, and general management capabilities.

Strategic Alliances and Collaboration Arrangements

OOO CardioNova Agreement

In October 2011, we entered into two definitive agreements with OOO CardioNova, a wholly-owned subsidiary of Maxwell Biotech Group, a Russian biotech fund, covering our AHRO-001 compound. The agreements cover a territory represented by the Russian Federation, the Ukraine and various countries in central Asia (the "Territory").

Under the Licensing Agreement, OOO CardioNova ("CardioNova") became an equity investor in us in exchange for the funding of Phase 1 and 2 human clinical trials conducted by a Clinical Research Organization ("CRO") located in Russia. Pursuant to the agreement, a Joint Steering Committee was established between both entities and determined final clinical protocols and research budget of $3.8 million. Pursuant to the agreement, common stock equal to 10%, 20%, 40%, and 30% of the research budget of $3.8 million will be issued to CardioNova upon achievement of four research and testing milestones. The shares to be issued will be determined based upon a 20 day average price prior to issuance up to $0.97/share.

For accounting purposes, the costs to be incurred in connection with this agreement are considered compensatory and are recognized as a Research and Development expense. Recognition of these costs as expense will generally occur when certain development projects are commenced and performance milestones become probable of achievement and are deemed earned.

During 2013, several clinical development milestones were considered probable or were achieved. Upon acceptance of the development plan which occurred on April 25, 2013, 391,753 shares of common stock (10% of the research budget) were issued to CardioNova at a 20-day weighted average prior to signature of the initial term sheet, or $0.97 per share. On April 29, 2013 the Russian Ministry of Healthcare approved the protocol submitted on January 22, 2013, upon which the Joint Steering Committee had based the Phase 1 protocol. Accordingly, 1,605,408 shares of our

common stock were issued at the weighted 20-day average of $0.4734, representing 20% of the approved budget.

Significant judgment is required in assessing when a performance milestone is probable of achievement and estimating the timing of when the performance of these milestones will be completed. These determinations are based on discussion between the Company and CardioNova personnel that address qualitative and quantitative factors, including, but not limited to, overall complexity associated with the assessment, stage of the clinical trial, progress made to date, results of testing, and consideration of the nature of the work remaining in the trial(s). We have completed the evaluation of the performance of the two remaining milestones as of December 31, 2013. The milestones specify that additional common stock issuances of 40% and 30% of the approved budget shall be issued upon the announcement of Phase 1 results and announcement of Phase 2 results, respectively. Each tranche will be priced at the lower of the weighted 20-day average immediately prior to each issuance event, or $0.97 per share. Our review of the progress by CardioNova on the milestone relating to Phase 1 work was estimated at approximately 80% completed and we determined that the achievement of the milestone was probable. As a result, we accrued $1,170,712 based upon the December 31, 2013 fair value of the estimated shares of common stock issuable at the end of fiscal year 2013 and was recorded as part of Research and Development – Related Party in the 2013 Statement of Operations. A corresponding liability for the estimate of the fair value of the shares to be issued is shown in our consolidated balance sheets as of December 31, 2013. The remaining value will be recognized as Research and Development expense in future periods based on actual progress toward this milestone and any variation of the actual total value of common stock issued or issuable upon future valuation measurement dates or upon completion of the milestone when compared to this periodic estimate will be expensed or credited to our statement of operations.

As of December 31, 2013, the final milestone relating to the Phase 2 clinical trial calling for additional issuance of our common stock is currently not yet believed to be probable of achievement and no estimated liability or expense has been recorded.

If CardioNova successfully develops and commercializes AHRO-001 in the Territory, we will be entitled to receive a quarterly royalty, based on net sales during the period using an escalating scale. The royalty agreement shall remain in force for the period in which intellectual property rights for AHRO-001 are in full force and effect in the Territory.

Under the Securities Purchase Agreement, CardioNova purchased 275,258 shares of our common stock for a cash purchase price of $0.97 per share, which took place in two installments. The first installment, which took place on December 22, 2011, was for the issuance of 154,639 shares upon receipt of $150,000 as specified in the Licensing Agreement. The 2nd installment of 120,619 shares took place on June 14, 2013 upon the delivery of final clinical product to be used in Phase 1 clinical trials for proceeds of $117,000.

We continue to seek other strategic alliances and collaborative arrangements for the development and/or commercialization of our bile acid IP product candidates that would provide financial support (potentially in the form of upfront payments, milestone payments, commercialization royalties and a sharing of research and development expenses), development capabilities, and ultimately commercial expertise to advance our bile acid technology. We also are reviewing various financial alternatives that would provide infusions of capital and other resources needed to advance our bile acid development programs. Although we are considering several potential opportunities, there can be no assurance that any strategic alliance or other financing alternatives will be successfully concluded.

Potential Alliances and Collaboration Arrangements

We continue to seek strategic alliances and other collaborative arrangements for the development and/or commercialization of our bile acid IP product candidates that would provide financial support (potentially in the form of upfront payments, milestone payments, commercialization royalties and a sharing of research and development expenses), development capabilities, and ultimately commercial expertise to advance our bile acid technology. We also are reviewing various financial alternatives that would provide infusions of capital and other resources needed to advance our bile acid development programs. Although we are considering several potential opportunities, there can be no assurance that any strategic alliance or other financing alternatives will be successfully concluded.

LICENSING, PATENTS AND OTHER PROPRIETARY RIGHTS AND REGULATORY DESIGNATIONS

We continue to invest in maintaining and enforcing our potential competitive position through a number of means: (i) by protecting our exclusive rights in our bile acid intellectual property through patents and patent extensions, and (ii) by seeking regulatory exclusivities, including potential new application for an existing drug and new drug product exclusivities.

Patents and Proprietary Rights

Atherosclerosis and Bile Acid-Related Patents and Patent Rights

We have been active in seeking patent protection for our innovations relating to new applications for existing natural compounds previously used for other indications. Our patent activities have focused particularly on different uses of bile acids in regression of atherosclerotic plaque in various forms of administration, including transdermally, sublingually and intravenously. Such administrations bypass the normal physical sequestration of bile acids within the digestive tract. The function of bile acids in the normal process of digestion is to break down ingested fats to allow

absorption by the intestines. The process of digestion returns the bile acids to the liver for re-processing or excretion in feces.

Between 2005 and 2012, we have filed with the U.S. and international patent offices a total of 22 patent applications in 9 families relating to the use of bile acids in the regression of atherosclerotic plaque, lipid dissolution and obesity via pharmacological preparations in various forms of administration. Such filings have been received and acknowledged by the respective filing offices.

In July 2012 we were notified of the U.S. patent office's intent to grant our first patent in the use of bile acids for dissolution of arterial plaque. In November 2012 the U.S. patent office issued patent #8,304,383 titled "Dissolution of Arterial Plaque Using Hyodeoxycholic Acid", with an expiration date of October 18, 2028.

In November 2013 we were notified of the U.S. patent office's intent to grant a second patent in the use of bile acids for dissolution of arterial plaque. We have not received final issuance of the patent as of December 31, 2013, and all other patent applications are still under review by the various patent agencies and are still pending.

Obesity Patents and Patent Rights

Included in the patent applications discussed above, are filings relating to the use of biocompatible emulsifiers in systemic circulation to treat obesity. Such filings elaborate on the scientific theories that exposure to bile acids could emulsify atherosclerotic soft vulnerable plaque, and that longer term exposure to circulatory significant quantities over an extended period of time could also break down accumulated fat cells around the body. Such theories currently are undergoing tests by third party organizations for validation.

Other Regulatory Designations

Food, Drug & Cosmetic Act 505(b)(2)New Drug Application

The FDA new drug application ("NDA") process has certain provisions under Section 505(b)(2) in which a compound previously approved as a reference listed drug ("RLD") can be considered for use for a new indication or condition. 505(b)(2) designation for a compound potentially allows sponsors to rely on certain data generated in the original RLD application. This designation can provide potential cost savings to companies seeking approvals for new indications or conditions by bypassing or demonstrating bioequivalence to the RLD and, if approved, market exclusivity for a limited period of time following approval. This exclusivity is separate and distinct from any patent(s) protection that may exist for the compound.

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COMPETITION

We are engaged in highly competitive fields of pharmaceutical research and development. Competition from numerous existing companies and others entering the fields in which we operate is intense and expected to increase. We expect to compete with, among others, conventional pharmaceutical companies. Most of these companies have substantially greater research and development, manufacturing, marketing, financial, technological personnel and managerial resources than we do. Acquisitions of competing companies by large pharmaceutical or health care companies could further enhance such competitors' financial, marketing and other resources. Moreover, competitors that are able to complete clinical trials, obtain required regulatory approvals and commence commercial sales of their products before we do may enjoy a significant competitive advantage over us. There are also existing therapies that may compete with the products we are developing.

Currently, the FDA has approved bile acids as pharmaceutical therapy for dissolution of gallstones for certain patients with a profile either not suitable for surgical intervention or not willing to undergo surgery for gallstone disease. Such use has been well tolerated and has a significant history of safety and efficacy in treatment of gallstone disease. Surgical intervention, specifically laparoscopic cholecystectomy, has become the preferred method of treatment of gallstone disease for patients who are acceptable surgical candidates. High surgical risk patients as well as those who choose to forego surgery as a method of treating gallstones, have used Actigall© for the treatment of gallstone disease for more than 20 years. Actigall© is based on the ursodeoxycholic acid, one of a family of bile acids (deoxycholic acids), or "DCA", that occur naturally in various forms in the digestive tracts of mammals. Our use of hyodeoxycholic acid ("HDCA") in our preliminary research is a different iteration of the forms of DCA found in the mammalian digestive tract. We are currently using HDCA as our primary compound in clinical research and as the basis for our IND filing.

GOVERNMENT REGULATION

The development, manufacture, distribution, marketing and advertising of drug products are subject to extensive regulation by federal, state and local governmental authorities in the United States, including the FDA, and by similar agencies in other countries. Any product that we develop must receive all relevant regulatory approvals or clearances before it may be marketed in a particular country. Gaining regulatory approval of a drug product candidate requires the expenditure of substantial resources over an extended period of time. As a result, larger companies with greater financial resources will likely have a competitive advantage over us.

Development Activities: To gain regulatory approval of our bile acid IP products, we must demonstrate, through experiments, preclinical studies and clinical trials that each of our drug product candidates meets the safety and efficacy standards established by the FDA and other international regulatory authorities. In addition, we and our

suppliers and contract manufacturers must demonstrate that all development-related laboratory, clinical and manufacturing practices comply with regulations of the FDA, other international regulators and local regulators. Regulations establish standards for such things as drug substances and materials; drug manufacturing operations and facilities and analytical laboratories and medical development laboratories processes and environments; in each instance, in connection with research, development, testing, manufacture, quality control, labeling, storage, record keeping, approval, advertising and promotion, and distribution of product candidates, on a product-by-product basis.

Pre-clinical Studies and Clinical Trials: Development testing generally begins with laboratory testing and experiments, as well as research studies using animal models to obtain preliminary information on a product's efficacy and to identify any safety issues. The results of these studies are compiled along with other information in an investigational new drug (IND) application, which is filed with the FDA. After resolving any questions raised by the FDA, which may involve additional testing and animal studies, clinical trials may begin. Regulatory agencies in other countries generally require a Clinical Trial Application (CTA) to be submitted and approved before each trial can commence in each country.

Clinical trials normally are conducted in three sequential phases and may take a number of years to complete. Phase 1 consists of testing the drug product in a small number of humans, normally healthy volunteers, to determine preliminary safety and tolerable dose range. Phase 2 usually involves studies in a limited patient population to evaluate the effectiveness of the drug product in humans having the disease or medical condition for which the product is indicated, determine dosage tolerance and optimal dosage and identify possible common adverse effects and safety risks. Phase 3 consists of additional controlled testing at multiple clinical sites to establish clinical safety and effectiveness in an expanded patient population of geographically dispersed test sites to evaluate the overall benefit-risk relationship for administering the product and to provide an adequate basis for product labeling. Phase 4 clinical trials may be conducted after approval to gain additional experience from the treatment of patients in the intended therapeutic indication.

The conduct of clinical trials is subject to stringent medical and regulatory requirements. The time and expense required to establish clinical sites, provide training and materials, establish communications channels and monitor a trial over a long period of time is substantial. The conduct of clinical trials at institutions located around the world is subject to foreign regulatory requirements governing human clinical trials, which vary widely from country to country. Delays or terminations of clinical trials could result from a number of factors, including stringent enrollment criteria, slow rate of enrollment, size of patient population, having to compete with other clinical trials for eligible patients, geographical considerations and others. Clinical trials are monitored by the regulatory agencies as well as medical advisory and standards boards, which could determine at any time to reevaluate, alter, suspend, or terminate a trial based upon accumulated data, including data concerning the occurrence of adverse health events during or related to the treatment of patients enrolled in the trial, and the regulator's or monitor's risk/benefit assessment with respect to patients enrolled in the trial. If they occur, such delays or suspensions could have a material impact on our bile acids development programs.

Regulatory Review: The results of preclinical and clinical trials are submitted to the FDA in an NDA, with comparable filings submitted to other international regulators. After the initial submission, the FDA has a period of time in which it must determine if the NDA is complete. After an NDA is submitted, although the statutory period provided for the FDA's review is less than one year, dealing with questions or concerns of the agency and, taking into account the statutory timelines governing such communications, may result in review periods that can take several years. If an NDA is accepted for filing, following the FDA's review, the FDA may grant marketing approval, request additional information, or deny the application if it determines that the application does not provide an adequate basis for approval. If the FDA grants approval, the approval may be conditioned upon the conduct of post-marketing clinical trials or other studies to confirm the product's safety and efficacy for its intended use. Until the FDA has issued its approval, no marketing activities can be conducted in the United States. Similar regulations apply in other countries.

Manufacturing Standards: The FDA and other international regulators establish standards and routinely inspect facilities and equipment, analytical and quality laboratories and processes used in the manufacturing and monitoring of products. Prior to granting approval of a drug product, the agency will conduct a pre-approval inspection of the manufacturing facilities, and the facilities of suppliers, to determine that the drug product is manufactured in accordance with current good manufacturing practices ("cGMP") regulations and product specifications. Following approval, the FDA will conduct periodic inspections. If, in connection with a facility inspection, the FDA determines that a manufacturer does not comply with cGMP regulations and product specifications, the FDA will issue an inspection report citing the potential violations and may seek a range of remedies, from administrative sanctions, including the suspension of our manufacturing operations, to seeking civil or criminal penalties.

International Approvals: If we succeed in gaining regulatory approval to market our products in the United States, we will still need to apply for approval with other international regulators. Regulatory requirements and approval processes are similar in approach to that of the United States. With certain exceptions, although the approval of the FDA carries considerable weight, international regulators are not bound by the findings of the FDA and there is a risk that foreign regulators will not accept a clinical trial design or may require additional data or other information not

requested by the FDA. In Europe, there is a centralized procedure available under which the EMEA will conduct the application review and recommend marketing approval to the European Commission, or not, for the sale of drug products in the EU countries.

Post-approval Regulation: Following the grant of marketing approval, the FDA regulates the marketing and promotion of drug products. Promotional claims are generally limited to the information provided in the product package insert for each drug product, which is negotiated with the FDA during the NDA review process. In addition, the FDA enforces regulations designed to guard against conflicts of interest, misleading advertising and improper compensation of prescribing physicians. The FDA will review, among other things, direct-to-consumer advertising, prescriber-directed advertising and promotional materials, sales representative communications to healthcare professionals, promotional programming and promotional activities on the Internet. The FDA will also monitor scientific and educational activities. If the FDA determines that a company has promoted a product for an unapproved use (“off-label”), or engaged in other violations, it may issue a regulatory letter and may require corrective advertising or other corrective communications to healthcare professionals. Enforcement actions may also potentially include product seizures, injunctions and civil or criminal penalties. The consequences of such an action and the related adverse publicity could have a material adverse effect on a developer’s ability to market its drug and its business as a whole.

Following approval, the FDA and other international regulators will continue to monitor data to assess the safety and efficacy of an approved drug. A post-approval discovery of previously unknown problems or failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or a recall or withdrawal of the product from the market, as well as possible civil or criminal sanctions. Similar oversight is provided by international regulators.

None of our products under development has been approved for marketing in the United States or elsewhere. We may not be able to obtain regulatory approval for any of our products under development. If we do not obtain the requisite governmental approvals or if we fail to obtain approvals of the scope we request, we or our licensees or strategic alliance or marketing partners may be delayed or precluded entirely from marketing our products, or the commercial use of our products may be limited. Such events would have a material adverse effect on our business, financial condition and results of operations.

Certain of our product candidates may qualify for Fast Track designation. Fast Track designation means that the FDA has determined that the drug is intended to treat a serious or life-threatening condition and demonstrates the potential to address unmet medical needs. An important feature is that it provides for accelerated approval and the possibility of rolling submissions and emphasizes the critical nature of close, early communication between the FDA and sponsor to improve the efficiency of product development. The FDA generally will review an NDA for a drug granted Fast Track designation within six months instead of the typical one to three years.

EMPLOYEES

As of February 17, 2014, we had 3 full-time employees all employed in the United States. No employees are subject to a collective bargaining agreement.

ITEM 1A. RISK FACTORS.

Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors and all other information contained in this annual report on Form 10-K before purchasing shares of our common stock. If any of the following risks occur, our business, financial condition and/or results of operations could be materially and adversely affected. In that case, the trading price of our common stock could decline, and you may lose some or all of your investment.

RISKS RELATED TO OUR BUSINESS

We will need additional funding to support our operations and capital expenditures. Such funds may not be available to us, which lack of availability could reduce our operating income, research and development activities and future business prospects.

While we have historically funded our working capital needs through the sale of equity and debt and through capital contributions from related parties, we will need to obtain significant additional funding to continue our planned operations, pursue business opportunities, react to unforeseen difficulties and/or respond to competitive pressures. Our financing activities in 2013, composed of exercise of common stock warrants issued in previous financings as well as a private placement of our common stock, which together raised about $787,000 during the year ended December 31, 2013, will allow us to continue ongoing clinical trial work as well as meet corporate obligations. We also concluded a private placement of convertible secured notes of $1,906,500 in early 2014, and we estimate the net funds from these financing activities will be sufficient to fund our planned activities through April 2014.

While we will need to raise significant additional funds we currently have no committed sources of additional capital, and there can be no assurance that any financing arrangements will be available in amounts or on terms acceptable to us, if at all. Furthermore, the sale of additional equity or convertible debt securities may result in additional dilution to existing stockholders. If adequate additional funds are not available, we may be required to delay, reduce the scope of or eliminate material parts of the implementation of our business strategy. This limitation would impede our growth and could result in a contraction of our operations, which would reduce our operating income, research and development activities and future business prospects.

We may be unable to continue as a going concern if we do not successfully raise additional capital.

If we are unable to successfully raise the capital we need we may need to reduce the scope of our business to fully satisfy our future short-term liquidity requirements. If we cannot raise additional capital or reduce the scope of our business, we may be otherwise unable to achieve our goals or continue our operations. As discussed in Note 2 in the Notes to the Consolidated Financial Statements, we have incurred losses from operations in the prior two years and have a lack of liquidity. These factors raise substantial doubt about our ability to continue as a going concern. In addition, our auditors have included in their report on our audited financial statements at December 31, 2013 and 2012 an explanatory paragraph expressing substantial doubt about our ability to continue as a going concern. While we believe that we will be able to raise the capital we need to continue our operations, there can be no assurances that we will be successful in these efforts or will be able to resolve our liquidity issues or eliminate our operating losses.

We have a history of operating losses and there can be no assurance that we can achieve or maintain profitability.

We have a history of operating losses and may not achieve or sustain profitability. Even if we achieve profitability, given the competitive and evolving nature of the industry in which we operate, we may not be able to sustain or increase profitability and our failure to do so would adversely affect our business, including our ability to raise additional funds.

We and our licensees will be subject to federal and state regulation. Our inability to comply with these regulations would cause us to curtail or cease our operating activities, which would result in a reduction in revenue and harm our business, operating results and financial condition.

We and our potential licensing partners are subject to many laws and regulations, and any adverse regulatory action may affect our ability to exploit our IP. Developing, manufacturing, and marketing regulated medical products and pharmaceuticals are subject to extensive and rigorous regulation by numerous government and regulatory agencies, including the FDA and comparable foreign agencies. Under the Federal Food, Drug, and Cosmetic Act (the "FDA Act"), regulated medical devices must receive FDA clearance and approval before they can be commercially marketed in the U.S. Markets outside the U.S. require similar clearance and approval before a medical product or pharmaceutical can be commercially marketed. We cannot guarantee that the FDA or other regulatory authorities will accept any IND applications we may file or that such authorities will not delay consideration of accepted applications. We also cannot guarantee that we will be able to agree on matters raised during the regulatory review process or obtain, directly or through our licensees, marketing clearance from the FDA and other governing agencies for any new products, or modifications or enhancements to existing products, which we depend on for royalty revenues. Furthermore, if FDA clearance is obtained, such clearance could (i) take a significant amount of time; (ii) require the expenditure of substantial resources; (iii) involve rigorous pre-clinical and clinical testing; (iv) require significant modifications to, or replacements of, products; and/or (v) result in limitations on the proposed uses of products.

Even after regulated medical products or pharmaceuticals have received marketing clearance, approvals by the FDA can be withdrawn due to failure to comply with regulatory standards or the occurrence of unforeseen issues following initial approval. Failure to comply with regulatory standards or subsequent discovery of unknown problems with a regulated medical product could result in fines, suspensions of regulatory approvals, seizures or recalls of devices, operating restrictions, and/or criminal prosecution. There can be no assurance that any FDA approval will not be subsequently withdrawn. Any adverse regulatory action by the FDA or another regulatory agency may restrict us and our licensees from effectively marketing and selling our IP applications in medical products, resulting in a reduction in revenue and harm to our business, operating results and financial condition. In addition, foreign laws and regulations have become more stringent and regulated medical products may become subject to increased regulation by foreign agencies in the future. Penalties for our licensees for any of their noncompliance with foreign governmental regulations could be severe, including revocation or suspension of their business licenses and criminal sanctions. Any foreign law or regulation imposed on our IP applications may materially affect our projected operations and revenues, by adversely impacting the distribution and sale of regulated medical products in foreign jurisdictions through our intended licensees.

We depend on third parties for testing the product candidates we intend to develop. Any failure of those parties to perform as expected or required could adversely affect our product development and commercialization plans.

We have used and intend to continue to use various types of collaborative arrangements with commercial and academic entities as vehicles for testing compounds and molecules for our future product candidates. Our research arrangements and any other similar relationships we may establish may not proceed on the expected timetable, or our collaborators may not perform as expected or required under their agreements with us. The research performed under such collaborations and arrangements may not provide results that are satisfactory for regulatory approval of products containing our compounds or molecules. If our research and commercial relationships fail to yield product candidates

that we can take into development, such failure will delay or prevent our ability to commercialize products.

In addition, we rely on third parties such as contract laboratories and clinical research organizations to conduct, supervise or monitor, some or all aspects of the preclinical studies and clinical trials for our product candidates, and we have limited ability to control many aspects of their activities. Accordingly, we have less control over the timing and other aspects of those clinical trials than if we conducted them on our own. Third-party contractors may not complete activities on schedule, or may not conduct our preclinical studies or clinical trials in accordance with regulatory requirements or our trial design. The failure of these third parties to perform their obligations could delay or prevent the development, approval and commercialization of our product candidates.

Our inability to effectively manage our growth could harm our business and materially and adversely affect our operating results and financial condition.

Our strategy envisions growing our business. We plan to expand our technology, sales, administrative and marketing organizations. Any growth in or expansion of our business is likely to continue to place a strain on our management and administrative resources, infrastructure and systems. As with other growing businesses, we expect that we will need to further refine and expand our business development capabilities, our systems and processes and our access to financing sources. We also will need to hire, train, supervise and manage new employees. These processes are time consuming and expensive, will increase management responsibilities and will divert management attention. We cannot assure you that we will be able to:

- expand our systems effectively or efficiently or in a timely manner;
- allocate our human resources optimally;
- meet our capital needs;
- identify and hire qualified employees or retain valued employees; or
- incorporate effectively the components of any business or product line that we may acquire in our effort to achieve growth.

Our inability or failure to manage our growth and expansion effectively could harm our business and materially and adversely affect our operating results and financial condition.

Future developments in technology or future pharmacological compounds may make the products we are planning to bring to market obsolete, with a consequent negative impact on our profitability.

We believe that the methods for treating and preventing atherosclerosis of the pharmacological compounds we intend to bring to market enjoy certain competitive advantages, including superior performance and cost-effectiveness. Although we are not aware of any other treatments or methods currently being developed that would compete with the methods we intend to employ, there can be no assurance that future developments in technology or pharmacological compounds will not make our technology non-competitive or obsolete, or significantly reduce our operating margins or the demand for our offerings, or otherwise negatively impact our profitability.

Our inability to effectively protect our intellectual property would adversely affect our ability to compete effectively, our potential ability to generate revenue, our financial condition and our results of operations.

We and our licensees may be unable to obtain IP rights to effectively protect our technology. Patents and other proprietary rights are an important part of our business plans. Our ability to compete effectively may be affected by the nature and breadth of our IP rights. We intend to rely on a combination of patents, trade secrets and licensing arrangements to protect our technology. While we intend to defend against any threats to our IP rights, there can be no assurance that any of our patents, patent applications, trade secrets, licenses or other arrangements will adequately protect our interests.

At this time, we have 1 approved patent, issued in November 2012, covering the use of hyodeoxycholic acid to treat atherosclerotic plaque. We have a second patent on which we have received a notice of allowance but the issuance of the patent has not yet taken place. There can also be no assurance that these or any additional patent issued to or licensed by us in the future will not be challenged or circumvented by competitors, or that any patent issued to or licensed by us will be found to be valid or be sufficiently broad to protect us and our technology. A third party could also obtain a patent that may require us to negotiate a license to conduct our business, and there can be no assurance that the required license would be available on reasonable terms or at all.

Additionally, we have pending patent applications in the United States and under the international Patent Cooperation Treaty covering other uses of our technology, for which we have not received, and may never receive, any additional patent protection for that technology. We cannot guarantee any particular result or decision by the U.S. Patent and

Trademark Office or a U.S. court of law, or by any patent office or court of any country in which we have sought patent protection. If we are unable to secure patent protection for our technology, our revenue and earnings, financial condition, or results of operations would be adversely affected. We do not warrant any opinion as to patentability or validity of any pending patent application. We do not warrant any opinion as to non-infringement of any patent, trademark, or copyright by us or any of our affiliates, providers, or distributors. Nor do we warrant any opinion as to invalidity of any third-party patent or unpatentability of any third-party pending patent application.

We may also rely on nondisclosure and non-competition agreements to protect portions of our technology. There can be no assurance that these agreements will not be breached, that we will have adequate remedies for any breach, that third parties will not otherwise gain access to our trade secrets or proprietary knowledge, or that third parties will not independently develop the technology.

IP litigation would be costly and could adversely impact our business operations.

We may have to take legal action in the future to protect our technology or to assert our IP rights against others. Any legal action could be costly and time consuming to us and no assurances can be made that any action will be successful. The invalidation of any patent or IP rights that we may own, or an unsuccessful outcome in lawsuits to protect our technology, could have a material adverse effect on our business, financial position, or results of operations.

We operate and compete in an industry that is characterized by extensive IP litigation. In recent years, it has been common for companies in the medical product and pharmaceutical businesses to aggressively file patent-infringement and other intellectual-property litigation in order to prevent the marketing of new or improved medical products, treatments, or pharmaceuticals. IP litigation can be expensive, complex, and protracted. Because of such complexity, and the vagaries of the jury system, IP litigation may result in significant damage awards and/or injunctions that could prevent the manufacture, use, distribution, importation, exportation, and sale of products or require us and/or any of our licensing partners to pay significant royalties in order to continue to manufacture, use, distribute, import, export, or sell products. Furthermore, in the event that our right to license or to market our technology is successfully challenged, and if we and/or our licensing partners fail to obtain a required license or are unable to design around a patent held by a third party, our business, financial condition, or results of operations could be materially adversely affected. We believe that the patents we have applied for, if granted, would provide valuable protection for our intellectual property, but there nevertheless could be no assurances that they would be respected or not subject to infringement by others.

Product safety and product liability claims and litigation would be costly and adversely impact our financial condition.

Our pharmaceutical compounds will have known side effects and could have significant side effects that are not identified during the research and approval phases. If patients are affected by known or unknown side effects, related claims may exceed insurance coverage and materially and adversely impact our financial condition.

Our industry is highly competitive and we have less capital and resources than many of our competitors, which may give them an advantage in developing and marketing products similar to ours or make our products obsolete.

We are engaged in highly competitive fields of pharmaceutical research and development. Competition from numerous existing companies and others entering the fields in which we operate is intense and expected to increase. We expect to compete with, among others, conventional pharmaceutical companies. Most of these companies have substantially greater research and development, manufacturing, marketing, financial, technological personnel and managerial resources than we do. Acquisitions of competing companies by large pharmaceutical or health care companies could further enhance such competitors' financial, marketing and other resources. Moreover, competitors that are able to complete clinical trials, obtain required regulatory approvals and commence commercial sales of their products before we do may enjoy a significant competitive advantage over us. There are also existing therapies that may compete with the products we are developing. There can be no assurance that we will be able to successfully compete against these other entities.

If we do not establish strategic partnerships to commercialize our products under development, we will have to undertake commercialization efforts on our own, which could be costly and may ultimately be unsuccessful.

We may selectively partner with other companies to obtain assistance for the commercialization of certain of our products. We may enter into strategic partnerships with third parties to develop and commercialize some of our products that are intended for larger markets or that otherwise require a large, specialized sales and marketing organization, and we may enter into strategic partnerships for products that are targeted beyond our selected target markets. We face competition in seeking appropriate strategic partners, and these strategic partnerships can be intricate and time consuming to negotiate and document. We may not be able to negotiate strategic partnerships on acceptable terms, or at all. We are unable to predict when, if ever, we will enter into any strategic partnerships because of the numerous risks and uncertainties associated with establishing strategic partnerships. If we are unable to negotiate strategic partnerships for our products under development, we may be forced to reduce the scope of our anticipated sales or marketing activities or undertake commercialization activities at our own expense. In addition, we will bear the entire risk related to the commercialization of these products. If we elect to increase our expenditures to

fund commercialization activities on our own, we will need to obtain additional capital, which may not be available to us on acceptable terms, or at all.

If our licensees fail to sustain compliance with regulatory standards and laws applicable to medical products production, manufacturing and quality processes, the marketing of our products could be suspended, and such suspension could, for our licensees, lead to fines, withdrawal of regulatory clearances, product recalls, or other consequences, any of which could in turn adversely affect our projected business operations, financial condition, or results of operations.

Our licensees, which will be manufacturers of medical products or pharmaceuticals, will be subject to periodic inspection by the FDA for compliance with regulations that require manufacturers to comply with certain practices and standards, including testing, quality control and documentation procedures. In addition, federal medical device reporting regulations will require them to provide information to the FDA whenever there is evidence that reasonably suggests that a medical product may have caused or contributed to a death or serious injury or, if a malfunction were to occur, could cause or contribute to a death or serious injury. Compliance with these requirements is subject to continual review and is rigorously monitored through periodic FDA inspections. In foreign markets, our licensing partners will be required to obtain certain certifications in order to sell medical products and will have to undergo periodic inspections by regulatory bodies to maintain these certifications. If our licensees fail to adhere to any laws and standards applicable to medical product manufacturers, the marketing of products could be suspended, and such failure could, for our licensees, lead to fines and withdrawal of regulatory clearances, product recalls, or other consequences, any of which could in turn adversely affect our projected business operations, financial condition, or results of operations. Our licensees will also be subject to certain environmental laws and regulations. Our licensing partners' manufacturing operations may involve the use of substances and materials regulated by various environmental protection agencies and regulatory bodies. We cannot guarantee that any licensee will sustain compliance with environmental laws, and that regulations will not have a material impact on our earnings, financial condition, or business operations.

Failure of our licensees to comply with laws and regulations relating to reimbursement of health care products may adversely impact our business operations.

Medical products are subject to regulation regarding quality and cost by the United States Department of Health and Human Services, Centers for Medicare & Medicaid services and comparable state and foreign agencies that are responsible for payment and reimbursement of healthcare goods and services. In the U.S., healthcare laws apply to our licensing partners' business operations when a reimbursement claim is submitted under a federal government funded healthcare program. Federal laws and regulations prohibit the filing of false or improper claims for federal payment and unlawful inducements for the referral of business reimbursable under federally-funded healthcare programs (known as the anti-kickback laws). If a governmental agency or regulatory body were to conclude that our licensees were not in compliance with applicable laws and regulations regarding payment or reimbursement of medical products, they could be subject to criminal and civil penalties, including exclusion from participation as a supplier of products to beneficiaries covered by government healthcare programs. Such exclusions could negatively affect our distribution channels, financial condition or results of operations.

Quality problems with a licensee's manufacturing processes could harm our reputation and affect demand for medical products using our technology.

Ensuring the quality of products and manufacturing processes is critical for medical product companies due to the high cost and seriousness of product failures or malfunctions. If any of our licensees failed to meet adequate quality standards, its and our reputations could be damaged and our revenues would decline. In addition, production of medical products which utilize our technology may depend on our licensees' abilities to engineer and manufacture precision components and assemble such components into intricate medical products. We cannot guarantee that our licensees or third-party suppliers will not encounter problems or delays in timely manufacturing or assembling our products and other materials related to the manufacture or assembly of our products, or in manufacturing our products in amounts sufficient to support our development and commercialization efforts. If our licensees fail to meet these requirements or fail to adapt to changing requirements, their and our reputations may suffer and demand for products implementing our technology would decline significantly.

Uncertainties regarding healthcare reimbursements may adversely affect our business.

Healthcare cost containment pressures decrease the prices end-users are willing to pay for medical products, which could have an adverse effect on our royalty revenue. Products that may implement our technology may be purchased by hospitals or physicians, which typically bill governmental programs, private insurance plans and managed care plans for the healthcare devices and services provided to their patients. The ability of these customers to obtain reimbursement from private and governmental third-party payors for the products and services they provide to patients is critical to commercial success. The availability of reimbursement affects which products customers purchase and the prices they are willing to pay. Reimbursement varies from country to country and can significantly impact the

acceptance of new products and services. Although we and our licensees may have a promising new product, we and our licensees may find limited demand for the medical product unless reimbursement approval is obtained from private and governmental third-party payors. Even if reimbursement approval is obtained from private and governmental third-party payors, we may still find limited demand for the product for other reasons. In addition, legislative or administrative reforms to the U.S., or to international reimbursement systems, in a manner that significantly reduces reimbursement for products or procedures using our technology, or denial of coverage for those products or procedures, could have a material adverse effect on our business, financial condition or results of operations.

Major third-party payors for hospital services in the U.S. and abroad continue to work to contain healthcare costs. The introduction of cost containment incentives, combined with closer scrutiny of healthcare expenditures by both private health insurers and employers, has resulted in increased discounts and a contractual adjustment to hospital charges for services performed and has shifted services between inpatient and outpatient settings. Initiatives to limit the increase of healthcare costs, including price regulation, are also ongoing in markets in which our licensees may do business. Hospitals or physicians may respond to these cost-containment pressures by insisting that our licensees lower prices, which may adversely affect our royalties.

In response to increasing healthcare costs, there has been and may continue to be proposals by legislators, regulators, and third-party payors to reduce these costs. If these proposals are passed, limitations and/or reductions may be placed on the net or allowable price of products implementing our technology or the amounts of reimbursement available for these products from customers, governmental bodies, and third-party payors. These limitations and reductions on prices may have a material adverse effect on our financial position and results of operations.

We and our licensees will be required to attract and retain top quality talent to compete in the marketplace.

We believe our future growth and success will depend in part on our and our licensees' abilities to attract and retain highly skilled managerial, product development, sales and marketing, and finance personnel. There can be no assurance of success in attracting and retaining such personnel. Shortages in qualified personnel could limit our ability to increase sales of existing products and services and launch new product and service offerings.

Our forecasts are highly speculative in nature and we cannot predict results in a development stage company with a high degree of accuracy.

Any financial projections, especially those based on ventures with minimal operating history, are inherently subject to a high degree of uncertainty, and their ultimate achievement depends on the timing and occurrence of a complex series of future events, both internal and external to the enterprise. There can be no assurance that potential revenues or expenses we project will, in fact, be received or incurred.

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We will be subject to evolving and expensive corporate governance regulations and requirements. Our failure to adequately adhere to these requirements or the failure or circumvention of our controls and procedures could seriously harm our business.

As a publicly traded company, we are subject to various federal, state and other rules and regulations, including applicable requirements of the Sarbanes-Oxley Act of 2002. Compliance with these regulations is costly and requires a significant diversion of management time and attention, particularly with regard to our disclosure controls and procedures and our internal control over financial reporting. Our internal controls and procedures may not be able to prevent errors or fraud in the future. Faulty judgments, simple errors or mistakes, or the failure of our personnel to adhere to established controls and procedures may make it difficult for us to ensure that the objectives of the control system are met. A failure of our controls and procedures to detect other than inconsequential errors or fraud could seriously harm our business and results of operations.

Our limited senior management team size may hamper our ability to effectively manage a publicly traded company while developing our products and harm our business.

Our management team has experience in the management of publicly traded companies and complying with federal securities laws, including compliance with recently adopted disclosure requirements on a timely basis. They realize it will take significant resources to meet these requirements while simultaneously working on licensing, developing and protecting our IP. Our management will be required to design and implement appropriate programs and policies in responding to increased legal, regulatory compliance and reporting requirements, and any failure to do so could lead to the imposition of fines and penalties and harm our business.

We have issued notes that subject us to possible remedies of a secured creditor and limit our financing alternatives.

Our obligations under certain outstanding convertible notes are secured by security interests in all of our and all of the assets of our subsidiaries, including intellectual property. If we default on our obligations under those Notes and related agreements, the holders of those notes will be entitled to all the remedies available to secured creditors under the applicable Uniform Commercial Code, including (without limitation) the ability to accelerate the due date for the entire principal amount, charge default interest and penalties and foreclose on our assets. In addition, we are required to comply with certain covenants under those notes, including covenants relating to incurring additional indebtedness without the consent of the holders of those notes. These covenants, in the absence of waiver by the holders of those notes, limit our ability to fund our operations through additional debt financing. Additionally, financial penalties in those notes and warrants issed in the transaction in which we sold those notes may make it difficult to us to obtain funding from, or be acquired by, a third party.

Our Chief Executive Officer's departure could be an event of default under the Notes.

While we believe that Thomas Gardner's services will be available to us, there can be no assurances that the financial arrangements that we have made for Mr. Gardner, or the provisions of the management consulting agreement we entered into with him will be effective and adequate at this stage in our development to retain his services. If Mr. Gardner ceases to be a contractor of our Company (other than due to a termination without good cause), that will be an event of default under the Notes unless we obtain a reasonably acceptable full-time replacement for Mr. Gardner within 90 days after such termination.

RISKS RELATED TO OUR COMMON STOCK

The limited trading market for our common stock results in limited liquidity for shares of our common stock and significant volatility in our stock price.

Although prices for our shares of common stock are quoted on the OTC electronic interdealer quotation system ("OTCQB"), there is little current trading and no assurance can be given that an active public trading market will develop or, if developed, that it will be sustained. The OTCQB is generally regarded as a less efficient and less prestigious trading market than other national markets. There is no assurance if or when our common stock will be quoted on another more prestigious exchange or market. Active trading markets generally result in lower price volatility and more efficient execution of buy and sell orders. The absence of an active trading market reduces the liquidity of our common stock.

The market price of our stock is likely to be highly volatile because for some time there will likely be a thin trading market for the stock, which causes trades of small blocks of stock to have a significant impact on our stock price. As a result of the lack of trading activity, the quoted price for our common stock on the OTCQB is not necessarily a reliable indicator of its fair market value. Further, if we cease to be quoted, holders of our common stock would find it more difficult to dispose of, or to obtain accurate quotations as to the market value of, our common stock, and the market value of our common stock would likely decline.

Trading in our common stock will be subject to regulatory restrictions since our common stock is considered a "penny stock."

Our common stock is currently, and in the near future will likely continue to be, considered a "penny stock." The Securities and Exchange Commission ("SEC") has adopted rules that regulate broker-dealer practices in connection with transactions in "penny stocks." Penny stocks generally are equity securities with a price of less than $5.00 (other than securities registered on certain national securities exchanges or quoted on the NASDAQ system, provided that current price and volume information with respect to transactions in such securities is provided by the exchange or system). The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from those rules, to deliver a standardized risk disclosure document prepared by the SEC, which specifies information about penny stocks and the nature and significance of risks of the penny stock market. The broker-dealer also must provide the customer with bid and offer quotations for the penny stock, the compensation of the broker-dealer and any salesperson in the transaction, and monthly account statements indicating the market value of each penny stock held in the customer's account. In addition, the penny stock rules require that, prior to a transaction in a penny stock not otherwise exempt from those rules; the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction. These disclosure and other requirements may adversely affect the trading activity in the secondary market for our common stock.

Substantial future sales of our common stock in the public market could cause our stock price to fall.

Sales of a significant number of shares of our common stock in the open market could cause additional harm to the market price of our common stock. Further reduction in the market price for our shares could make it more difficult to raise funds through future equity offerings.

Some of our shares may also be offered from time-to-time in the open market pursuant to Rule 144, and these sales may have a depressive effect on the market for our shares. In general, a non-affiliate who has held restricted shares for a period of six months may sell an unrestricted number of shares of our common stock into the market.

We have not paid dividends in the past and do not expect to pay dividends for the foreseeable future, and any return on investment may be limited to potential future appreciation on the value of our common stock.

We currently intend to retain any future earnings to support the development and expansion of our business and do not anticipate paying cash dividends in the foreseeable future. Our payment of any future dividends will be at the

discretion of our board of directors after taking into account various factors, including without limitation, our financial condition, operating results, cash needs, growth plans and the terms of any credit agreements that we may be a party to at the time. To the extent we do not pay dividends, our stock may be less valuable because a return on investment will only occur if and to the extent our stock price appreciates, which may never occur. In addition, investors must rely on sales of their common stock after price appreciation as the only way to realize their investment, and if the price of our stock does not appreciate, then there will be no return on investment. Investors seeking cash dividends should not purchase our common stock.

Our officers, directors and principal stockholders can exert significant influence over us and may make decisions that are not in the best interests of all stockholders.

Our officers, directors and principal stockholders (greater than 5% stockholders) collectively own approximately 42.2% of our outstanding common stock, and approximately 56.3% of our fully-diluted common stock. As a result of such ownership and the Voting Agreement that is in place, these stockholders will be able to affect the outcome of, or exert significant influence over, all matters requiring stockholder approval, including the election and removal of directors and any change in control. In particular, this concentration of ownership of our common stock could have the effect of delaying or preventing a change of control of us or otherwise discouraging or preventing a potential acquirer from attempting to obtain control of us. This, in turn, could have a negative effect on the market price of our common stock. It could also prevent our stockholders from realizing a premium over the market prices for their shares of common stock. Moreover, the interests of this concentration of ownership may not always coincide with our interests or the interests of other stockholders, and accordingly, they could cause us to enter into transactions or agreements that we would not otherwise consider.

Anti-takeover provisions may limit the ability of another party to acquire us, which could cause our stock price to decline.

Our certificate of incorporation, as amended, our bylaws and Delaware law contain provisions that could discourage, delay or prevent a third party from acquiring us, even if doing so may be beneficial to our stockholders. In addition, these provisions could limit the price investors would be willing to pay in the future for shares of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

Not applicable.

ITEM 2. PROPERTIES.

We maintain our principal executive offices at 2301 Dupont Drive, Suite 525, Irvine, California 92612-7525, which consists of 1,930 square feet of office space, for which we entered into a lease in June 2012. Under that lease, which will run for a period of 66 months, we are obligated to pay an annual rent of approximately $42,846. The lease, which commenced on October 1, 2012, also contains an annual escalator clause of approximately 2.5% each April 1st throughout the term of the lease. We do not occupy any other facility or own any real property.

ITEM 3. LEGAL PROCEEDINGS.

We are not aware of any pending or threatened legal actions to which we are a party or of which our property is the subject that would, if determined adversely to us, have a material adverse effect on our business and operations.

We have from time to time been involved in disputes and proceedings arising in the ordinary course of business. In addition, as a public company, we are also potentially susceptible to litigation, such as claims asserting violations of securities laws. Any such claims, with or without merit, if not resolved, could be time-consuming and result in costly litigation. There can be no assurance that an adverse result in any future proceeding would not have a potentially material adverse effect on our business, results of operations or financial condition.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

Market Information

Our common stock is quoted on The OTC Market's electronic interdealer quotation QB system under the symbol “AHRO.” As of February 17, 2014, the number of stockholders of record of shares of our common stock was 160. The following table sets forth, for the periods indicated, the high and low bid information for our common stock, as determined from sporadic quotations on the OTCQB. The following quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not represent actual transactions. As of February 17, 2014, there were 41,584,020 shares of our common stock issued and outstanding.

	High	**Low**
Year ended December 31, 2012		
First Quarter	$1.32	$0.84
Second Quarter	$0.90	$0.45
Third Quarter	$0.89	$0.50
Fourth Quarter	$0.75	$0.42
Year ended December 31, 2013		
First Quarter	$0.80	$0.35
Second Quarter	$0.79	$0.50
Third Quarter	$0.74	$0.51
Fourth Quarter	$0.67	$0.35

Dividends

We have not paid dividends on our common stock and do not expect to declare and pay dividends on our common stock in the foreseeable future.

Sales of Unregistered Securities

On January 3, 2013, we issued to a consultant a warrant to purchase 50,000 shares of our common stock having a per share exercise price of $0.50, are fully vested upon grant and are exercisable for three years from the date of grant.

On January 31, 2013 we issued 560,713 shares of our common stock upon the exercise of a warrant to purchase such shares at $0.223 per share, for cash proceeds to the Company of $125,039.

On February 4, 2013, we issued 112,142 shares of our common stock upon the exercise of a warrant to purchase such shares at $0.223 per share, for cash proceeds to the Company of $25,008.

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On February 4, 2013, one of our directors exercised a warrant to purchase 336,427 shares of our common stock at $0.223 per share using a “cashless exercise” feature of the warrant, resulting in our issuing 186,380 shares of our common stock. There were no cash proceeds to the Company in this transaction and 150,047 shares under the warrant were cancelled.

On February 20, 2013, we granted to two consultants options to purchase 800,000 shares of our common stock having a per share exercise price of $0.50 the options have a term of seven years and vest 25% on February 15,2014 and ratably thereafter on a quarterly basis over 3 years.

On April 25, 2013, we issued 576,907 shares of our common stock upon conversion of $167,303 of principal and interest under an outstanding 2.5% Senior Secured Convertible Note at $0.29 per share.

On May 22, 2013 we issued 1,997,161 shares of our common stock valued at $1,198,297, or $0.60 per share based on the closing sale price of our common stock on the date of issuance (as quoted on the OTCQB), to CardioNova upon 2 milestone achievements in the development of protocols and other preparation costs for Phase 1 clinical trials paid for by CardioNova.

On June 14, 2013, we sold 120,619 shares of our common stock at $0.97 per share for cash proceeds of $117,000 in accordance with the CardioNova License Agreement pertaining to the supply of clinical drug supplies to CardioNova to conduct the Phase 1 clinical trials.

On July 18, 2013, we issued 6,456 shares of our common stock valued at $4,200, or $0.65 per share based on the closing sale price of our common stock on the date of issuance (as quoted on the OTCQB), to one of our directors to settle unpaid fees for services rendered.

On August 8, August 12 and August 16, 2013, we issued an aggregate of 800,002 units consisting of 800,002 shares of our common stock and warrants, having a term of 10 years and an exercise price of $0.75 per share, to purchase 240,001 shares of our common stock. The aggregate gross proceeds from these private placement transactions were $520,001.

Except as noted in regard to the private placement sale securities, in connection with all other stock sales above, we did not pay any underwriting discounts or commissions. None of the sales of securities described or referred to above was registered under the Securities Act. Each of the purchasers was an accredited investor with whom we or one of our affiliates had a prior business relationship, and no general solicitation or advertising was used in connection with

the sales. In making the sales without registration under the Securities Act, we relied upon the exemption from registration contained in Section 4(2) of the Securities Act.

ITEM 6. SELECTED FINANCIAL DATA.

Not applicable.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

This discussion summarizes the significant factors affecting our operating results, financial condition and liquidity and cash flows for the periods ended December 31, 2013 and 2012. The discussion and analysis that follows should be read together with the consolidated financial statements and the notes to the consolidated financial statements included elsewhere in this report. Management's Discussion and Analysis of Financial Condition and Results Of Operations is provided as a supplement to the accompanying consolidated financial statements and footnotes to help provide an understanding of our financial condition, the changes in our financial condition and our results of operations. Except for historical information, the matters discussed in this Management's Discussion and Analysis of Financial Condition and Results of Operations are forward looking statements that involve risks and uncertainties and are based upon judgments concerning various factors that are beyond our control. Our actual results could differ materially from the results anticipated in any forward-looking statements as a result of a variety of factors, including those discussed in Section 1A above – "Risk Factors."

Overview

Z&Z Medical Holdings, Inc. ("Z&Z Nevada") was incorporated in the State of Nevada on December 13, 2006 with contributed intellectual property from its founders. Z&Z Nevada was engaged in developing the contributed intellectual property while seeking sources of funding to conduct further research and development. In November 2009 Z&Z Nevada incorporated Z&Z Delaware and merged Z&Z Nevada into Z&Z Delaware in March 2010. On March 26, 2010 we entered into a merger agreement with Z&Z Merger Corporation, our wholly-owned subsidiary and Z&Z Delaware, and on May 13, 2010, Z&Z Merger Corporation merged into Z&Z Delaware with Z&Z Delaware surviving as our operating subsidiary. Concurrent with the Merger, Z&Z Delaware changed its name to AtheroNova Operations, Inc. and we changed our name from Trist Holdings, Inc. to AtheroNova Inc. The business of AtheroNova Operations, pharmaceuticals and pharmaceutical intellectual property, became our business upon consummation of the Merger.

We have developed intellectual property, covered by our issued and pending patent applications, which uses certain pharmacological compounds uniquely for the treatment of atherosclerosis, which is the primary cause of cardiovascular diseases. Atherosclerosis occurs when cholesterol of fats are deposited and form as plaques on the walls of the arteries. This buildup reduces the space within the arteries through which blood can flow. The plaque can also rupture, greatly restricting or blocking blood flow altogether. Through a process of several genetic signaling agents, such compounds stimulate reverse cholesterol transport which dissolves the plaques so they can be eliminated through normal body processes and avoid such rupturing or restriction of blood flow. Such compounds may be used both to treat and prevent atherosclerosis.

In the near future, we plan to continue studies and trials to demonstrate the efficacy of our IP. Ultimately, we plan to use or license our technology to various licensees throughout the world who may use it in treating or preventing atherosclerosis and other medical conditions or sublicense the IP to other such users. Our potential licensees may also produce, market or distribute products which utilize or add our compounds and technology in such treatment or prevention.

General

Our operating costs consist of research and development costs as well as general and administrative costs. Such costs consist primarily of expenses under research and development contracts, payroll and related costs, legal and professional fees (including patent acquisition costs) and corporate infrastructure costs. We expect that our operating expenses will increase as we continue executing our business plan, in addition to the added costs of operating as a public company.

Historically, we have funded our working capital needs primarily through the sale of shares of our capital stock and debt financing.

The Merger was accounted for as a reverse merger (recapitalization) with AtheroNova Operations deemed to be the accounting acquirer, and our Company deemed to be the legal acquirer. Accordingly, the following discussing represents a discussion of the operations of our wholly-owned subsidiary, AtheroNova Operations for the periods presented.

Results of Operations

Year ended December 31, 2013 Compared to the year ended December 31, 2012

	Years ended December 31,		Increase
	2013	**2012**	**(decrease)**
Costs and expenses:			
Share-based compensation	$2,369,009	$--	$2,369,009
Other research and development expenses	2,030,285	986,261	1,044,024
Total research and development expenses	**4,399,294**	**986,261**	**3,413,033**
General and administrative:			
Share-based compensation	1,359,579	1,182,920	176,659
Other general and administrative expenses	1,455,277	1,468,805	(13,528)
Total general and administrative expenses	**2,814,856**	**2,651,725**	**163,131**
Other (income) expense:			
Interest expense	601,664	871,431	(269,767)
Cost to induce conversion of 12% notes	--	866,083	(866,083)
Change in fair value of derivative liabilities	--	(2,640,497)	2,640,497
Gain on extinguishment of derivative liability	--	(97,975)	97,975
Other (income)/expense	(1,092)	(1,467)	375
Total other (income) expense	**(600,572)**	**(1,002,425)**	**1,602,997**
Net loss	**$(7,814,722)**	**$(2,635,561)**	**$5,179,161**

During the years ended December 31, 2013 and 2012, we did not recognize any revenues. We are considered a development stage company and do not expect to have revenues relating to our products in the foreseeable future, if at all.

For the twelve months ended December 31, 2013, research and development expenses increased to $4,399,294 from $986,261 in the same period in 2012. This is due to significant increases in spending in 2013 for Phase 1 clinical trial drug product, consultants and employees added to oversee our clinical trial programs as well as expenses recognized with the issuance of common stock upon achievement of two milestones and accrual based upon the probability of another milestone as of December 31, 2013 pursuant to the CardioNova clinical trial program. The expenses in the period ended December 31, 2012 included purchase of active pharmaceutical ingredient, formulation development and additional pre-clinical research as reported in that that period.

General and administrative costs increased by $163,131, to $2,814,856, in 2013 compared to $2,651,725 for 2012 due slight increases in travel, lodging and professional fees due to increased activity with CardioNova and increased participation in financial and investor conferences during the current year. We incurred non-cash stock-based compensation expense of $878,179 for our officers, directors and consultants in 2013, compared to $1,182,920 for 2012. Also recognized in 2013 was $422,500 for below market purchases by directors and $58,900 for the cost of shares gifted to officers, both from a controlling stockholder of the Company.

For the year ended December 31, 2013, interest expense was $601,664 compared to $871,431 for the year ended December 31, 2012. The decrease in interest expense was due to the recognition of unamortized discounts on a larger balance of converted notes in 2012 when compared to 2013. For the year ended December 31, 2012, we also recognized amortization expense on the short term convertible notes issued and matured in 2012 with no comparable activity in the current year.

For the twelve months ended December 31, 2012, the cost to induce conversion of 12% notes was $866,083. These costs related to the expensing of the Beneficial Conversion Feature recorded on the 12% convertible notes upon conversion in 2012 as well as the fair value of warrants issued to the holders of our short-term convertible notes as inducement to convert the notes in October 2012. There was no comparable expense in 2013.

For the year ended December 31, 2012, there was a gain of $2,640,497 recorded for the change in fair value of derivative liabilities during the period. There was no comparable gain in the same period of 2013.

For the year ended December 31, 2012, gain on extinguishment of derivative liability was $97,975 compared to $0 for the comparable period in 2013. This gain is due to the extinguishment of a portion of the derivative liability due to the partial conversion of the 2.5% Senior Convertible Notes during the prior year period with no corresponding gain in the current year.

Net loss for the year ended December 31, 2013, was $7,814,722 compared to a loss of $2,635,561 for the year ended December 31, 2012. The increased net loss is due to the increased spending as the Company increases its research and development activities, recognition of expenses of research and development expenses paid or to be paid by issuance of our common stock and the corresponding consultants and employee expenses for staffing to monitor and conduct our clinical research. Additionally, there were no gains associated with revaluation or extinguishing derivative liabilities as were recorded in fiscal year 2012.

Liquidity and Capital Resources

From inception to December 31, 2013, we incurred a deficit during the development stage of $22,029,794 primarily due to non-cash costs relating to the valuation of our note and warrant issuances accounted for as a derivative liability, and net operating losses. We expect to continue to incur additional losses for at least the next twelve months and for the foreseeable future. These losses have been incurred through a combination of research and development activities as well as patent work related to our technology, expenses related to the Merger and to public reporting obligations and the costs to supporting all of these activities.

We have financed our operations since inception primarily through equity and debt financings. During the twelve months ended December 31, 2013, we had a net decrease in cash and cash equivalents of $2,477,836. This decrease resulted largely from net cash provided by financing activities of $787,048, offset by net cash used in operating activities of $3,261,824. Total cash as of December 31, 2013 was $266,210 compared to $2,744,046 at December 31, 2012.

As of December 31, 2013, we had a working capital deficit of $989,341 compared to working capital of $2,121,023 at December 31, 2012. We have reported net losses of $7,814,722 and $2,635,561 for the years ended December 31, 2013 and 2012, respectively. The net loss attributable from date of inception, December 13, 2006 to December 31, 2013, amounts to $22,029,794. Management believes that we will continue to incur net losses through at least December 31, 2014.

These matters raise substantial doubt about our ability to continue as a going concern. The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Our available working capital and capital requirements will depend upon numerous factors, including progress of our research and development programs, our progress in and the cost of ongoing and planned nonclinical and clinical testing, the timing and cost of obtaining regulatory approvals, the cost of filing, prosecuting, defending, and enforcing patent claims and other intellectual property rights, in-licensing activities, competing technological and market developments, the resources that we devote to developing manufacturing and commercializing capabilities, the status of our competitors, our ability to establish collaborative arrangements with other organizations and our need to purchase additional capital equipment.

Our continued operations will depend on whether we are able to raise additional funds through various potential sources, such as equity and debt financing, other collaborative agreements, strategic alliances, and our ability to realize the full potential of our technology in development. Such additional funds may not become available on acceptable terms and there can be no assurance that any additional funding that we do obtain will be sufficient to meet

our needs in the long term. Through December 31, 2013, a significant portion of our financing has been through private placements of common stock and warrants and debt financing. Unless our operations generate significant revenues and cash flows from operating activities, we will continue to fund operations from cash on hand and through the similar sources of capital previously described. We can give no assurances that any additional capital that we are able to obtain will be sufficient to meet our needs. We believe that we will continue to incur net losses and negative cash flows from operating activities for the foreseeable future.

Based on our resources available at December 31, 2013, plus the gross proceeds of the 6% Secured Note financing completed in February 2014, which provided gross cash proceeds of $1,906,500, management believes that we have sufficient capital to fund our operations through April of 2014. Management believes that we will need additional equity or debt financing, or to generate revenues through licensing of our products or entering into strategic alliances as well as reduce and defer expenses where possible to be able to sustain our operations further into 2014. Furthermore, we will need additional financing thereafter to complete development and commercialization of our intellectual property. There can be no assurances that we can successfully complete development and commercialization of our intellectual property.

2.5% Senior Secured Convertible Notes Payable

On May 13, 2010, we entered into a Securities Purchase Agreement with W-Net Fund I, L.P. (“W-Net”), Europa International, Inc. (“Europa”) and MKM Opportunity Master Fund, Ltd. (“MKM” and together with W-Net and Europa, the “Purchasers”), pursuant to which the Purchasers, on May 13, 2010, purchased from us (i) 2.5% Senior Secured Convertible Notes for a cash purchase price of $1,500,000 (the “Original Notes”), and (ii) Common Stock Purchase Warrants pursuant to which the Purchasers may purchase up to 1,908,798 shares of our common stock at an exercise price equal to approximately $0.39 per share (the “Capital Raise Transaction”). A portion of the proceeds from the Capital Raise Transaction were used to pay $250,000 owed by us to the two principal holders of our common stock, W-Net and Europa, and to reimburse them for legal and accounting fees and other expenses incurred by them and our Company in connection with the Merger and the Capital Raise Transaction. The net proceeds available to us for our operations were reduced by such payments.

The Original Notes accrued 2.5% interest per annum with a maturity of 4 years after the closing of the Capital Raise Transaction. No cash interest payments were required, except that accrued and unconverted interest is due on the maturity date and on each conversion date with respect to the principal amount being converted, provided that such interest may be added to and included with the principal amount being converted. If there is an uncured event of default (as defined in the Original Notes), of which one event of default would be the departure of Thomas Gardner without us obtaining a suitable full-time replacement within 90 days of such departure, the holder of each Original Note may declare the entire principal and accrued interest amount immediately due and payable. Default interest will accrue after an event of default at an annual rate of 12%. If there is an acceleration, a mandatory default amount equal to 120% of the unpaid Original Note principal plus accrued interest may be payable.

The warrants may be exercised on a cashless basis under which a portion of the shares subject to the exercise are not issued in payment of the purchase price, based on the then fair market value of the shares.

On May 13, 2010, we also entered into a Security Agreement and an Intellectual Property Security Agreement with the Purchasers and AtheroNova Operations, pursuant to which all of our obligations under the Original Notes are secured by first priority security interests in all of our assets and the assets of AtheroNova Operations, including intellectual property. Upon an event of default under the Original Notes or such agreements, the Original Note holders may be entitled to foreclose on any of such assets or exercise other rights available to a secured creditor under California and Delaware law. In addition, under a Subsidiary Guarantee, AtheroNova Operations will guarantee all of our obligations under the Original Notes.

The Original Notes and warrants issued in connection therewith included an anti-dilution provision that allowed for the automatic reset of the conversion or exercise price upon any future sale of common stock instruments at or below the current conversion or exercise price.

On July 6, 2011, we entered into the First Amendment and Exchange Agreement with each of W-Net, Europa and MKM pursuant to which the Purchasers agreed to exchange the Original Notes for the Amended and Restated 2.5% Senior Secured Convertible Notes (the “Amended Notes”). The Amended Notes had the same terms as the Original Notes (as described above), except that each Amended Note is convertible at any time into common stock at a per share conversion price of $0.29, subject to adjustment.

On June 15, 2012, we entered into the Second Amendment and Exchange Agreement with each W-Net, Europa and MKM pursuant to which the Purchasers agreed to exchange the Amended Notes for Second Amended and Restated 2.5% Senior Secured Convertible Notes (the “Second Amended Notes”). The Second Amended Notes have the same terms as the Amended Notes (as described above) except as follows: (i) each Second Amended Note has an automatic conversion provision and removal of the applicable beneficial ownership limitations effective the later of 61 days

following our notice to the Purchasers of our application to list or quote our securities on a national securities exchange or the date immediately prior to the effective date of the listing or quotation of our securities on the applicable exchange; (ii) the price-based anti-dilution provisions contained in the Amended Notes have been removed; and (iii) under the Securities Purchase Agreement, as currently amended, if we met two specified operating benchmarks during the first twenty-nine months after the closing of the first Original Note purchase, an additional $1,500,000 in note purchases, substantially in the form of the Second Amended Notes (without warrants), could be requested by us from the Purchasers. The determination of whether we had met the benchmarks was solely at the discretion of the Purchasers. If the benchmarks were determined to have been achieved, then we could have required the Purchasers to make the additional $1,500,000 of note purchases. If such benchmarks were not attained in the 29-month period or we did not exercise the option to request the additional notes, then the Purchasers, in their discretion, during the next 10 days could elect to purchase up to $1,500,000 of notes, substantially in the form of the Second Amended Notes (without warrants), having an initial conversion price which is 100% of the conversion price in the Second Amended Notes. On July 23, 2012 the Purchasers notified us of their intention of putting the additional $1,500,000 in notes in 3 tranches. The first $500,000 was put to us and we issued notes (substantially in the form of the Second Amended Notes) (the “Additional Notes” and together with the Original Notes, the Amended Notes and the Second Amended Notes, the “Senior Notes”) on September 4, 2012. These Additional Notes mature on September 3, 2016. The second tranche of $498,333 was put to us and we issued Additional Notes on October 1, 2012. These Additional Notes mature on September 30, 2016. The final tranche of $500,000 was put to us and we issued Additional Notes on October 31, 2012. These Additional Notes mature on October 30, 2016. In addition, the 1,908,798 warrants to purchase shares of our common stock issued in conjunction with the Original Notes were also amended to remove the reset provision in the warrants’ exercise price. All other existing terms of such warrants did not change.

From issuance through December 31, 2012, the Purchasers exercised their option to convert a portion of the Senior Notes into our common stock. During the year ended December 31, 2010, principal in the amount of $98,049 and accrued interest in the amount of $965 was converted at a per share price of approximately $0.39 into 249,488 and 2,456 shares, respectively, of our common stock. During the year ended December 31, 2011, principal on the amount of $446,600 was converted at a per share price of $0.29 into 1,540,000 shares of our common stock. In addition, we also issued 45,164 shares of our common stock with a market value of $27,098 to settle $13,098 of accrued interest relating to the Senior Notes. The issuance of these common shares resulted in an additional charge of $14,000 that has been reflected as a financing cost in the 2011 statement of operations. During the year ended December 31, 2012, principal on the amount of $690,851 was converted at a per share price of $0.29 into 2,382,245 shares of our common stock. In addition, we also issued 111,474 shares of our common stock with a market value of $72,278 to settle $32,401 of accrued interest relating to these notes. The issuance of these common shares resulted in an additional charge of $39,877 that has been reflected as an additional expense in the 2012 statement of operations. During the year ended December 31, 2013, principal on the amount of $165,000 was converted at a per share price of $0.29 into 568,965 shares of our common stock. In addition, we also issued 7,942 shares of our common stock with a market value of $4,765 to settle $2,303 of accrued interest relating to these notes. The issuance of these common shares resulted in an additional charge of $2,462 that has been reflected as an additional expense in the accompanying consolidated statement of operations. The aggregate balance of the Senior Notes outstanding as of December 31, 2013 amounted to $1,597,833.

The Senior Notes may not be prepaid, or forced by us to be converted in connection with an acquisition of our Company, except in a limited case more than a year after the applicable note issuance where the average of our stock trading price for 30 days on a national trading market other than the OTC Bulletin Board ("OTCBB") is at least three times the conversion price, in which event, and subject to the satisfaction of certain other requirements, the Senior Note holders may elect to receive at least double the unpaid principal amounts in cash and other requirements are satisfied. In such a limited case acquisition, there could also be a forced cashless exercise of the warrants subject to similar requirements and optional cash payments to the warrant holders of at least double the exercise prices of their warrants.

The Senior Notes greatly restrict the ability of our Company or AtheroNova Operations to issue indebtedness or grant liens on our or its respective assets without the Senior Note holders' consent. They also limit and impose financial costs on our acquisition by any third party.

Each of the Original Notes, Amended Notes and warrants had, until being amended in June 2012, included an anti-dilution provision that allowed for the automatic reset of the conversion or exercise price upon any future sale of common stock instruments at or below the current conversion or exercise price. We considered the current Financial Accounting Standards Board guidance of "Determining Whether an instrument Indexed to an Entity's Own Stock" which indicates that any adjustment to the fixed amount (either conversion price or number of shares) of the instrument, regardless of the probability or whether or not within the issuers' control, means the instrument is not indexed to the issuers' own stock. Accordingly, we determined that as the conversion price of the Original Notes and Amended Notes and the strike price of the warrants may have fluctuated based on the occurrence of future offerings or events, such prices were not fixed amounts. As a result, we determined that the conversion features of the Original Notes, Amended Notes and the warrants are not considered indexed to our stock and characterized the value of the Original Notes, Amended Notes and the warrants as derivative liabilities upon issuance.

6% Secured Convertible Notes Payable

In January and February 2014, we entered into Securities Purchase Agreements with approximately 31 accredited investors (the "Purchasers"), pursuant to which the Purchasers, on February 12, 2014, purchased from us (i) 6% Secured Convertible Notes for a cash purchase price of $1,906,500 (the "6% Notes"), and (ii) Common Stock Purchase Warrants pursuant to which the Purchasers may purchase up to 4,144,568 shares of our common stock at an exercise price equal to $0.23 per share (the "6% Note Placement"). The 6% Notes have a 3 year term and are convertible into common stock at any time at the lesser of i) $0.23 per share and ii) seventy percent of the average of the three lowest daily volume-weighted average prices ("VWAPs") occurring during the 20 consecutive trading days immediately preceding the applicable conversion date. The associated warrants are exercisable immediately, have a 10 year term and are exercisable at $0.23 per share. The warrants may be exercised on a cashless basis under which a portion of the shares subject to the exercise are not issued in payment of the purchase price, based on the then fair market value of the shares.

The 6% Notes accrue 6% interest per annum, require no cash interest payments, except that accrued and unconverted interest is due on the maturity date and on each conversion date with respect to the principal amount being converted, provided that such interest may be added to and included with the principal amount being converted. If there is an uncured event of default (as defined in the 6% Notes), the holder of each 6% Note may declare the entire principal and accrued interest amount immediately due and payable. Default interest will accrue after an event of default at an annual rate of 12%. If there is an acceleration, a mandatory default amount equal to 120% of the unpaid 6% Note principal plus accrued interest may be payable.

On February 12, 2014, we also entered into a Security Agreement and an Intellectual Property Security Agreement with the Purchasers and AtheroNova Operations, pursuant to which all of our obligations under the 6% Notes are secured by security interests in all of our assets and the assets of AtheroNova Operations, including intellectual property on a pari passu basis with the 2.5% Senior Secured Convertible Notes outstanding. Upon an event of default under the 6% Notes or such agreements, the 6% Note holders may be entitled to foreclose on any of such assets or exercise other rights available to a secured creditor under California and Delaware law. In addition, under a Subsidiary Guarantee, AtheroNova Operations will guarantee all of our obligations under the 6% Notes.

A portion of the proceeds from the 6% Notes were generated through the efforts of Philadelphia Brokerage Corporation, whereby we agreed to pay a commission of 8% of the aggregate gross proceeds in cash and 2% in the form of our common stock for placements generated by Philadelphia Brokerage Corporation. Accordingly, commissions of $68,720 and a common stock issuance of 65,351 shares were due to them at the completion of the 6% Note Placement. The net proceeds available to us for our operations were reduced by the cash payment.

Commitments

Development Commitments

In October 2011, we entered into two definitive agreements with OOO CardioNova, a wholly-owned subsidiary of Maxwell Biotech Group, a Russian biotech fund, covering our AHRO-001 compound. The agreements cover a territory represented by the Russian Federation, the Ukraine and various countries in central Asia (the "Territory").

Under the Licensing Agreement, OOO CardioNova ("CardioNova") became an equity investor in our Company in exchange for the funding of Phase 1 and 2 human clinical trials conducted by a Clinical Research Organization ("CRO") located in Russia. Pursuant to the agreement, a Joint Steering Committee was established between both entities and determined the final clinical protocols and the research budget of approximately $3.8 million. Upon acceptance of the development plan on April 25, 2013, 391,753 shares of common stock (10% of the research budget) were issued to CardioNova at a 20-day weighted average prior to signature of the initial term sheet, or $0.97 per share. On April 29, 2013 the Russian Ministry of Healthcare approved the protocol submitted on January 22, 2013, upon which the Joint Steering Committee had based the Phase 1 protocol. Accordingly, 1,605,408 shares of common stock were issued at the weighted 20-day average of $0.4734, representing 20% of the approved budget.

Additional common stock issuances of 40% and 30% of the approved budget shall be issued upon the announcement of Phase 1 results and announcement of Phase 2 results, respectively. The number of shares of common stock to be issued at each tranche will be determined at the lower of the weighted 20-day average immediately prior to each issuance event, or $0.97 per share, whichever is lower. As of December 31, 2013, the Phase1 or Phase 2 milestones calling for additional issuance of common stock had not been achieved.

If CardioNova successfully develops and commercializes AHRO-001 in the Territory, we will be entitled to receive a quarterly royalty, based on net sales during the period using an escalating scale. The royalty agreement shall remain in force for the period in which intellectual property rights for AHRO-001 are in full force and effect in the Territory.

Under the Securities Purchase Agreement, CardioNova purchased a total of 275,258 shares of our common stock for a cash purchase price of $0.97 per share, which took place in two installments. The first installment, which took place on December 22, 2011, was for the issuance of 154,639 shares upon receipt of $150,000 as specified in the Licensing Agreement. The 2nd installment of 120,619 shares took place on June 14, 2013 upon delivery of final clinical product to be used in Phase 1 clinical trials.

Research and Development Projects

We have a research agreement signed in September 2012, amended in April 2013 and again in September 2013, with a major university in Southern California to conduct contract research in additional compounds covered under our pending patents. This agreement calls for payment of all research costs relating to the study of dosage and efficacy of bile acids on the atherosclerotic plaque in a non-human model. The total potential cost of the amended project is $236,323, to be paid in four installments over the estimated one year length of the study. As of December 31, 2013, $236,323 has been expensed, of which $120,327 has been recorded as part of Research and Development costs on the accompanying statement of operations for the year ended December 31, 2013. The final report on this research project was received in early 2014.

The Company has multiple testing agreements signed in September 2012 and August 2013 for testing of the oral toxicity of AHRO-001 in non-human models. Each agreement can be terminated anytime and there are no commitments or guarantees other than to reimburse costs incurred prior to termination.

The study initiated in September 2012, with a cost of approximately $510,000, has completed the active phase of testing and is in the data write-up stage of the project. The process is ongoing and to date, $488,530 has been expensed, of which $389,785 has been recorded as part of Research and Development costs on the accompanying statement of operations for the year ended December 31, 2013.

The studies authorized in August 2013, with a cost of approximately $224,600, have both completed the active phase of testing and are in the initial data analysis stage of the projects. The process is ongoing and to date, $175,950 has been expensed, all of which has been recorded as part of Research and development costs on the accompanying statement of operations for the period ended December 31, 2013.

Summary of Contractual Commitments

Employment Contracts

Contracts pursuant to which we have engaged the services of our Chief Executive Officer and Chief Financial Officer are incorporated by reference as Exhibits 10.1 and 10.2 to the Current Report on Form 8-K (File No. 000-52315) filed with the SEC on September 3, 2010 and, for our Chief Financial Officer, amended in a Current Report on Form 8-K filed with the SEC on December 4, 2012. These agreements expired on August 29, 2013.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements.

Critical Accounting Policies

In December 2001, the SEC requested that all registrants discuss their most "critical accounting policies" in management's discussion and analysis of financial condition and results of operations. The SEC indicated that a "critical accounting policy" is one which is both important to the portrayal of the Company's financial condition and results and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. On an ongoing basis, management evaluates its estimates and judgment, including those related to revenue recognition, accrued expenses, financing operations and contingencies and litigation. Management bases its estimates and judgment on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates under different assumptions or conditions. The following represents a

summary of our critical accounting policies.

Research and Development Expenses

Research and development costs are expensed as incurred and include costs of consultants and contract research facilities who conduct research and development on our behalf and on behalf of AtheroNova Operations. We have contracted with third parties to facilitate, coordinate and perform agreed upon research and development of our technology. We have expensed all costs associated with the conduct of the laboratory research as well as the costs associated with peripheral clinical researchers as period costs.

Accounting for Share-Based Research and Development Costs

Under its research and development (R&D) agreements, the Company is obligated to issue shares of common stock if milestones are met by the R&D vendor. It is the Company’s policy to recognize expense for these shares when it is estimated that there is a high probability of meeting the milestone. The Company accrues the share based expense based upon the estimated percentage of completion of the milestone. The shares are valued at the market price at the end of the period and revalued at each period until issued. At December 31, 2013, approximately 3 million shares of common stock are to be issued pursuant to the agreement with a fair value of $1,170,712. The liability was recorded as part of "Research and development costs - payable in stock" in the accompanying balance sheet below long term liabilities as it is only payable in shares of common stock.

Stock-Based Compensation

We periodically issue stock options and warrants to employees and non-employees in non-capital raising transactions for services and for financing costs. We account for stock option and warrant grants issued and vesting to employees based on current accounting guidance, whereby the award is measured at its fair value at the date of grant and is amortized ratably over the vesting period. We account for stock option and warrant grants issued and vesting to non-employees based on current accounting guidance, whereby the fair value of the stock compensation is based on the measurement date as determined at either (a) the date at which a performance commitment is reached, or (b) at the date at which the necessary performance to earn the equity instrument is complete.

We estimate the fair value of stock options using the Black-Scholes-Merton option-pricing model, which was developed for use in estimating the fair value of options that have no vesting restrictions and are fully transferable. This model requires the input of subjective assumptions, including the expected price volatility of the underlying stock and the expected life of stock options. Projected data related to the expected volatility of stock options is based on the historical volatility of the trading prices of our common stock and the expected life of stock options is based upon the average term and vesting schedules of the options. Changes in these subjective assumptions can materially affect the fair value of the estimate, and therefore the existing valuation models do not provide a precise measure of the fair value of our employee stock options.

Derivative Financial Instruments

We evaluate our financial instruments to determine if such instruments are derivatives or contain features that qualify as embedded derivatives. For derivative financial instruments that are accounted for as liabilities, the derivative instrument is initially recorded at its fair value and is then re-valued at each reporting date, with changes in the fair value reported in the consolidated statements of operations. For stock-based derivative financial instruments, we use both the Black-Scholes-Merton and Binomial option pricing models to value the derivative instruments at inception and on subsequent valuation dates. The classification of derivative instruments, including whether such instruments should be recorded as liabilities or as equity, is evaluated at the end of each reporting period. Derivative instrument liabilities are classified in the balance sheet as current or non-current based on whether or not net-cash settlement of the derivative instrument could be required within 12 months of the balance sheet date.

Recently Issued Accounting Standards

In January 2013, the FASB issued Accounting Standard Update (“ASU”) 2013-01, Balance Sheet (Topic 210): Clarifying the Scope of Disclosures about Offsetting Assets and Liabilities. This ASU clarifies which instruments and transactions are subject to the offsetting disclosure requirements established by ASU 2011-11. This guidance is effective for annual and interim reporting periods beginning January 1, 2013. The Company does not believe the adoption of this update will have a material effect on its financial position and results of operations.

On March 4, 2013, the FASB issued ASU 2013-05, “Foreign Currency Matters (Topic 830): Parent’s Accounting for the Cumulative Translation Adjustment upon Derecognition of Certain Subsidiaries or Groups of Assets within a Foreign Entity or of an Investment in a Foreign Entity” (“ASU 2013-05”). ASU 2013-05 updates accounting guidance related to the application of consolidation guidance and foreign currency matters. This guidance resolves the diversity in practice about what guidance applies to the release of the cumulative translation adjustment into net income. This guidance is effective for interim and annual periods beginning after December 15, 2013. The Company does not believe the adoption of this update will have a material effect on its financial position and results of operations.

In July 2013, the FASB issued ASU No. 2013-11, Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Loss, or a Tax Credit Carryforward Exists. Topic 740, Income Taxes, does not include explicit guidance on the financial statement presented of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. There is diversity in practice in the presentation of unrecognized tax benefits in those instances and the amendments in this update are intended to eliminate that diversity in practice. The amendments are effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. The amendments should be applied prospectively to all unrecognized tax benefits that exist at the effective date. Early adoption is permitted. The Company does not believe the adoption of this update will have a material effect on its financial position and results of operations.

Other accounting pronouncements did not or are not believed by management to have a material impact on the Company’s present or future consolidated financial statements.

ITEM 7A. QUANTITATIVE AND QUALITITATIVE DISCLOSURES ABOUT MARKET RISK.

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

INDEX TO COSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors

AtheroNova Inc.

Irvine, California

We have audited the accompanying consolidated balance sheets of AtheroNova Inc. and subsidiary (a development stage company) as of December 31, 2013 and 2012, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for the years then ended and for the period from December 13, 2006 (inception) to December 31, 2013. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits 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 audits included consideration of internal control over financial reporting as a basis for designing audit procedures that we considered appropriate under 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 includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes 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 financial position of AtheroNova Inc. and subsidiary as of December 31, 2013 and 2012, and the results of their operations and their cash flows for the years then ended and for the period from December 13, 2006 (inception) to December 31, 2013, 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, the Company is in the development stage and has not generated any revenues from operations to date, and does not expect to do so in the foreseeable future. The Company has experienced recurring operating losses and negative operating cash flows since inception, and has financed its working capital requirements through the recurring sale of its convertible notes and equity securities. These conditions raise

substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2 to the consolidated financial statements. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ WEINBERG & COMPANY, P.A.

WEINBERG & COMPANY, P.A.

Los Angeles, California

February 27, 2014

ATHERONOVA INC. AND SUBSIDIARY

(A Development Stage Company)

Consolidated Balance Sheets

	December 31, 2013	December 31, 2012
Assets		
Current Assets		
Cash	$266,210	$2,744,046
Other current assets	22,438	17,622
Total Current Assets	288,648	2,761,668
Equipment, net	7,405	8,514
Deposits and other assets	12,777	23,777
Total Assets	$308,830	$2,793,959
Liabilities and Stockholders' Equity (Deficit)		
Current Liabilities		
Accounts payable and accrued expenses	$811,404	$603,629
Interest payable	76,462	37,016
Current portion of 2.5% Senior convertible note, net of discount of $37,377	390,123	--
Total Current Liabilities	1,277,989	640,645
2.5% Senior secured convertible notes	1,170,333	1,762,833
Discount on convertible notes	(807,200)	(1,402,030)
2.5% Senior secured convertible notes, net of discount	363,133	360,803
Research & development costs payable in common stock-related party	1,170,712	--
Commitments and contingencies	--	--
Stockholders' Equity (Deficit):		
Preferred stock, $0.0001 par value, 10,000,000 shares authorized, none outstanding at December 31, 2013 and 2012	--	--
Common stock, $0.0001 par value, 100,000,000 shares authorized, 41,584,020 and 37,223,640 outstanding at December 31, 2013 and 2012, respectively	4,147	3,711
Additional paid in capital	19,522,643	16,003,872
Deficit accumulated during the development stage	(22,029,794)	(14,215,072)
Total Stockholders' Equity (Deficit)	(2,503,004)	1,792,511
Total Liabilities and Stockholders' Equity (Deficit)	$308,830	$2,793,959

See accompanying notes to consolidated financial statements.

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ATHERONOVA INC. AND SUBSIDIARY

(A Development Stage Company)

Consolidated Statements of Operations

For the years ended December 31, 2013 and 2012, and

For the period from December 13, 2006 (Inception) through December 31, 2013

	Years ended		**Cumulative From**
	December 31,		**Inception through**
	2013	**2012**	**December 31, 2013**
Revenue, net	$--	$--	$--
Operating expenses:			
Research and development	2,030,285	986,261	3,889,621
Research and development – related party	2,369,009	-	2,369,009
General and administrative	2,814,856	2,651,725	9,547,943
Impairment charge-intellectual property	--	--	572,868
Loss from operations	(7,214,150)	(3,637,986)	(16,379,441)
Other income (expense):			
Other income	2,457	2,832	8,839
Cancellation of related-party debt	--	--	100,000
Merger-related expenses	--	--	(323,294)
Interest expense	(601,664)	(871,431)	(2,481,178)
Private Placement Costs	--	--	(2,148,307)
Cost to induce conversion of 12% notes	--	(866,083)	(866,083)
Gain on extinguishment of derivative liabilities	--	97,975	909,368
Change in fair value of derivative liabilities	--	2,640,497	(839,569)
Total other income (expense)	(599,207)	1,003,790	(5,640,224)
Net loss before income taxes	(7,813,357)	(2,634,196)	(22,019,665)
Provision for income taxes	1,365	1,365	10,129
Net loss	$(7,814,722)	$(2,635,561)	$(22,029,794)
Loss per share – basic and diluted	$(0.20)	$(0.09)	
Weighted average shares outstanding – basic and diluted	39,730,289	30,635,249	

See accompanying notes to consolidated financial statements.

ATHERONOVA INC. AND SUBSIDIARY

(A Development Stage Company)

Consolidated Statements of Stockholders' Equity (Deficit)

For the period from December 13, 2006 (Inception) through December 31, 2013

Description	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Deficit Accumulated During Development Stage	Total Stockholders' Equity (Deficit)
Issuance of common stock to founders	19,233,029	$ 1,923	$(1,923)	$--	$--
Net loss	--	--	--	--	--
Balance – December 31, 2007	19,233,029	1,923	(1,923)	--	--
Issuance of common stock for cash at $0.223 per share	1,010,132	101	224,899	--	225,000
Net loss	--	--	--	(173,623)	(173,623)
Balance – December 31, 2008	20,243,161	2,024	222,976	(173,623)	51,377
Issuance of common stock for cash at $0.223 per share	224,663	23	99,977	--	100,000
Fair value of common stock issued for services	224,284	22	49,978	--	50,000
Net Loss	--	--	--	(12,322)	(12,322)
Balance – December 31, 2009	20,692,108	2,069	372,931	(185,945)	189,055
Issuance of common stock for cash at $0.223 per share	1,010,132	101	224,899	--	225,000
Exercise of warrants	392,498	39	87,488	--	87,527
Fair value of common stock issued for services	466,570	47	140,453	--	140,500
Fair value of warrants issued for services	--	--	518,000	--	518,000
Contribution of stockholder notes payable to capital	--	--	200,000	--	200,000
Fair value of vested options	--	--	287,355	--	287,355
Shares issued in reverse merger	607,647	56	1,225	--	1,281
Shares issued upon note conversion	251,944	25	98,989	--	99,014
Net loss	--	--	--	(15,656,852)	(15,656,852)
Balance – December 31, 2010	23,420,899	2,337	1,931,340	(15,842,797)	(13,909,120)
Issuance of common stock for cash at $0.55 per share	3,145,695	311	1,729,830	--	1,730,141
Issuance of common stock for cash at $0.97 per share	154,639	15	149,985	--	150,000
Fair value of vested options	--	--	630,744	--	630,744
Fair value of common stock and warrants purchased by employees and vendors below	--	--	309,417	--	309,417

of market price					
Fair value of common stock and warrants issued to settle accounts payable	33,863	3	72,996	--	72,999
Fair value of common stock issued for services	50,000	5	72,495	--	72,500
Fair value of warrants issued for services	--	--	22,470	--	22,470
Common stock issued upon conversion of notes payable	1,585,164	157	473,541	--	473,698
Net income	--	--	--	4,263,286	4,263,286
Balance – December 31, 2011	28,390,260	2,828	$5,392,818	(11,579,511)	(6,183,865)
Issuance of common stock for cash at $0.50 per share	4,480,000	448	2,061,339	--	2,061,787
Fair value of vested options	--	--	803,770	--	803,770
Fair value of warrants issued with 12% notes-	--	--	58,387	--	58,387
Fair value of warrants and beneficial conversion feature due to changes to 12% notes upon modification	--	--	866,083	--	866,083
Fair value of beneficial conversion feature of 2.5% senior convertible notes	--	--	1,498,333	--	1,498,333
Fair value of derivative liability extinguished upon modification of the 2.5% convertible notes			3,472,549		3,472,549
Fair value of common stock issued to settle accounts payable	30,061	3	23,745	--	23,748
Fair value of common stock issued for services	459,600	46	256,054	--	256,100
Fair value of shares transferred to employees and vendors by controlling stockholder	--	--	123,050	--	123,050
Common stock issued upon conversion of notes payable	3,863,719	386	1,447,744	--	1,448,130
Net loss	--	--	--	(2,635,561)	(2,635,561)
Balance – December 31, 2012	37,223,640	3,711	16,003,872	(14,215,072)	1,792,511
Common stock issued upon exercise of warrants at $0.223 per share	859,235	86	149,961	--	150,047
Issuance of common stock for cash at $0.65 per share	800,002	80	519,921	--	520,001
Issuance of common stock for cash at $0.97 per share	120,619	12	116,988	--	117,000
Fair value of vested options and warrants	--	--	878,179	--	878,179
Fair value of common stock issued to settle accounts payable	6,456	--	4,518	--	4,518
Fair value of common stock issued for services	1,997,161	200	1,198,097	--	1,198,297
Fair value of shares transferred or sold to employees and directors by controlling stockholder	--	--	481,400	--	481,400
Common stock issued upon conversion of notes payable	576,907	58	169,707	--	169,765
Net loss	--	--	--	(7,814,722)	(7,814,722)
Balance – December 31, 2013	**41,584,020**	**$ 4,147**	**$19,522,643**	**$(22,029,794)**	**$(2,503,004)**

See accompanying notes to consolidated financial statements.

ATHERONOVA INC. AND SUBSIDIARY

(A Development Stage Company)

Consolidated Statements of Cash Flows

For the years ended December 31, 2013 and 2012, and

For the period from December 13, 2006 (Inception) through December 31, 2013

	Years ended December 31,		Cumulative From Inception through December 31, 2013
	2013	**2012**	
Operating Activities:			
Net loss	$(7,814,722)	$(2,635,561)	$(22,029,794)
Adjustments to reconcile net loss to net cash used in operating activities:			
Loss on settlement of accounts payables	6,980	44,356	105,713
Amortization of debt discount	557,453	769,185	2,266,942
Depreciation	4,169	3,399	11,674
Fair value of vested options and warrants	878,179	803,770	3,449,935
Fair value of common stock issued for services	1,198,297	256,100	1,717,397
Research and development costs payable in common stock	1,170,712	--	1,170,712
Fair value of shares transferred or sold to employees, directors and vendors by controlling stockholder	481,400	123,050	604,450
Impairment charge-intellectual property	--	--	572,867
Cost of private placement	--	--	2,148,307
Cost to induce conversion of 12% notes payable	--	866,083	866,083
Gain on extinguishment of derivative liabilities	--	(97,975)	(909,368)
Gain due to change in fair value of derivative liabilities	--	(2,640,497)	839,569
Gain due to cancellation of debt	--	--	(100,000)
Changes in operating assets and liabilities:			
Accounts payable and interest payable	249,524	482,152	1,087,561
Other current assets, deposits and other assets	6,184	(28,490)	(35,215)
Net cash used in operating activities	(3,261,824)	(2,054,428)	(8,233,167)
Investing Activities			
Purchase of equipment	(3,060)	(7,913)	(19,079)
Investment in intellectual property	--	--	(372,867)
Cash received from reverse merger	--	--	1,281
Net cash used in investing activities	(3,060)	(7,913)	(390,665)
Financing Activities			

Proceeds from issuance of common stock, net	787,048	2,061,787	5,366,503
Proceeds from 12% notes-net	--	645,200	645,200
Repayment of convertible notes-short term	--	(15,000)	(15,000)
Proceeds from sale of 2.5% senior secured convertible notes, net	--	1,498,333	2,893,339
Net cash provided by financing activities	787,048	4,190,320	8,890,042
Net change in cash	(2,477,836)	2,127,979	266,210
Cash - beginning balance	2,744,046	616,067	--
Cash - ending balance	**$266,210**	**$2,744,046**	**$266,210**
Supplemental disclosure of cash flow information:			
Cash paid for interest	--	--	32,666
Cash paid for income taxes	$1,365	$1,365	$10,129
Supplemental disclosure of non-cash investing and financing transactions:			
Stockholder notes issued in exchange for intellectual property	$--	$--	$200,000
Conversion of convertible notes payable and accrued interest to equity	$169,765	$1,448,130	$2,190,616
Derivative liability created upon issuance of the 2.5% senior secured convertible notes and attached warrants	$--	$--	$1,500,000
Conversion of accounts payable to related party notes	$--	$--	$100,000
Fair value of warrants and beneficial conversion feature associated with issued convertible notes	$--	$1,556,720	$1,556,720
Common stock issued to settle accounts payable	$9,283	$23,748	$106,030
Fair value of derivative liability extinguished upon modification of the 2.5% convertible notes	$--	$3,472,549	$3,472,549

See accompanying notes to consolidated financial statements.

ATHERONOVA INC. and SUBSIDIARY

(a Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2013 and 2012, and

For the period from December 13, 2006 (Inception) through December 31, 2013

1. ORGANIZATION

Z&Z Medical Holdings, Inc. ("Z&Z Nevada") was incorporated under the laws of the State of Nevada on December 13, 2006 (Inception). Z&Z Nevada had its headquarters located in Laguna Niguel, California. On November 30, 2009, a separate corporation named Z&Z Medical Holdings, Inc. ("Z&Z Delaware") was incorporated under the laws of the State of Delaware and on March 3, 2010, Z&Z Nevada was merged into Z&Z Delaware. On May 13, 2010, pursuant to an Agreement and Plan of Merger dated March 26, 2010, (i) our subsidiary, Z&Z Merger Corporation, merged with and into Z&Z Delaware (the "Merger") and the surviving subsidiary corporation changed its name to AtheroNova Operations, Inc. ("AtheroNova Operations"), (ii) we assumed all the outstanding options and warrants of Z&Z Delaware and (iii) we completed a capital raise transaction in which we sold $1,500,000 in 2.5% Senior Secured Convertible Notes. The former holders of AtheroNova Operations' common stock became holders of approximately 98% of our outstanding common stock. On May 21, 2010, holders of approximately 76.7% of the then outstanding shares of our Super-Voting Common Stock, approximately 90.7% of the then outstanding shares of our common stock, and approximately 77.1% of the combined voting power of the then outstanding shares of our Super-Voting Common Stock and our common stock approved an amendment of our certificate of incorporation that (i) decreased the authorized number of shares of our common stock to 100,000,000, (ii) designated 10,000,000 shares of blank check preferred stock, and (iii) adopted a 1-for-200 reverse stock split. The amendment to our certificate of incorporation became effective on June 23, 2010.

As a result of the Merger, AtheroNova is now engaged, through AtheroNova Operations, in development of pharmaceutical preparations and pharmaceutical intellectual property. We will continue to be a development stage company for the foreseeable future. We have entered into contracts with two research sites for our second round of pre-clinical trials.

Immediately prior to the Merger, we had 107,272,730 shares of our common stock issued and outstanding. In connection with the Merger, we issued 88,575,048 shares of our Super-Voting Common stock in exchange for the issued and outstanding shares of common stock of AtheroNova Operations, and assumed AtheroNova Operations' outstanding options and warrants which became exercisable to purchase an aggregate of up to 16,552,227 shares of

our Super-Voting Common Stock. Upon the effectiveness of the 1-for-200 reverse stock split all shares of our Super-Voting Common Stock were automatically converted on a 50-to-1 basis into our common stock, resulting in the issuance of 22,143,763 shares of our common stock to the former holders of AtheroNova Operation's common stock, and the outstanding shares of common stock held by our existing stockholders were combined into 607,647 shares of our common stock including 90,166 shares subsequently adjusted for rounding.

Since former holders of AtheroNova Operation's common stock owned, after the Merger, approximately 98% of our shares of common stock, and as a result of certain other factors, including that all members of our executive management are members of AtheroNova Operation's management, AtheroNova Operations is deemed to be the acquiring company for accounting purposes and the Merger was accounted for as a reverse merger and a recapitalization in accordance with generally accepted accounting principles in the United States ("GAAP"). These consolidated financial statements reflect the historical results of AtheroNova Operations prior to the merger and that of the combined company following the Merger, and do not include the historical financial results of AtheroNova Inc. prior to the completion of the merger.

2. BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The summary of significant accounting policies presented below is designed to assist in understanding our consolidated financial statements. Such consolidated financial statements and accompanying notes are the representation of our management, who are responsible for their integrity and objectivity.

Development Stage

We are currently in the development stage, and our business plan is to develop commercial relationships with third parties for the development, marketing and sale of products based on our Intellectual Property ("IP") and to derive revenue through the licensing of our IP to such third parties.

Use of Estimates

In preparing these consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the consolidated financial statements and the reported amount of revenues and expenses during the reporting periods. Actual results could differ from those estimates. Significant estimates and assumptions included in our consolidated financial statements relate to the valuation of long-lived assets, accrued liabilities, and valuation assumptions related to the calculation of equity based compensation and in the calculation of the derivative liability.

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Going Concern

The accompanying consolidated financial statements have been prepared under the assumption that we will continue as a going concern. Such assumption contemplates the realization of assets and satisfaction of liabilities in the normal course of business. As of December 31, 2013, we have an accumulated deficit of $22,029,794 and a stockholders' deficit of $2,503,004. We have incurred recurring losses from operations since inception, and utilized cash flow from operating activities of $3,261,824 during the year ended December 31, 2013. These factors, among others, raise substantial doubt about our ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might be necessary should we be unable to continue as a going concern.

During 2013, we secured funding through the exercise of warrants issued in previous financings with proceeds of $150,047, the sale of a second tranche of common stock to CardioNova upon delivery of clinical trial material with proceeds of $117,000 and closed a private placement with net proceeds of $520,001.

In February 2014, the Company placed $1,906,500 of Senior Secured 6% Notes to investors (See Note 11 Subsequent Events) and continues to seek additional long-term funding sources. Management expects that the current funds on hand will be sufficient to continue operations through April of 2014. There can be no assurances that the proceeds from these note sales will be sufficient to fund the Company operations for a sufficient period of time in order to secure significant additional funding. There can be no assurances that sufficient funding, if any at all, will be raised by these or future discussions or the cost of such investments will be reasonable.

In light of the foregoing, management will also seek funding through grants and other such funds available from private and public sources established to further research in health care and advancement of science. Management continues to meet with representatives of private and public sources of funding and will continue to do so in the coming months.

Principles of Consolidation

The consolidated financial statements include the accounts of our Company and our wholly-owned subsidiary, AtheroNova Operations. Intercompany transactions and balances have been eliminated in consolidation.

Research and Development Costs

Costs incurred for research and development are expensed as incurred. Purchased materials that do not have an alternative future use are also expensed. For the years ended December 31, 2013 and 2012, and for the period from inception to December 31, 2013, research and development costs incurred were $4,399,294, $986,261 and $6,258,630, respectively.

Accounting for Share based Research and Development Costs

Under its Research and Development (R&D) agreements, the Company is obligated to issue shares of common stock if milestones are met by the R&D vendor. It is the Company’s policy to recognize expense for these shares when it is estimated that there is a high probability of meeting the milestone. The Company accrues the share based expense based upon the estimated percentage of completion of the milestone. The shares are valued at the market price at the end of the period and revalued at each period until issued. At December 31, 2013, approximately 3 million shares of common stock are to be issued pursuant to the agreement with a fair value of $1,170,712. The liability was recorded as part of "Research and development costs - payable in stock" in the accompanying balance sheet below long term liabilities as it is only payable in shares of common stock.

Income Taxes

Current income tax expense is the amount of income taxes expected to be payable for the current year. A deferred income tax asset or liability is established for the expected future consequences of temporary differences in the financial reporting and tax bases of assets and liabilities. We consider future taxable income and ongoing, prudent and feasible tax planning strategies, in assessing the value of its deferred tax assets. If we determine that it is more likely than not that these assets will not be realized, we will reduce the value of these assets to their expected realizable value, thereby decreasing net income. Evaluating the value of these assets is necessarily based on our judgment. If we subsequently determine that the deferred tax assets, which had been written down, would be realized in the future, the value of the deferred tax assets would be increased, thereby increasing net income in the period when that determination was made.

Basic and Diluted Income/Loss per Share

Our computation of earnings per share ("EPS") includes basic and diluted EPS. Basic EPS is measured as the income (loss) available to common stockholders divided by the weighted average common shares outstanding for the period. Diluted income (loss) per share reflects the potential dilution, using the treasury stock method, that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the income (loss) of the Company as if they had been converted at the beginning of the periods presented, or issuance date, if later. In computing diluted income (loss) per share, the treasury stock method assumes that outstanding options and warrants are exercised and the proceeds are used to purchase common stock at the average market price during the period. Options and warrants may have a dilutive effect under the treasury stock method only when the average market price of the common stock during the period exceeds the exercise price of the options and warrants. Potential common shares that have an anti-dilutive effect (i.e., those that increase income per share or decrease loss per share) are excluded from the calculation of diluted EPS.

Income (loss) per common share is computed by dividing net income (loss) by the weighted average number of shares of common stock outstanding during the respective periods. Basic and diluted (loss) per common share is the same for periods in which the Company reported an operating loss because all warrants and stock options outstanding are anti-dilutive.

There were no adjustments to net loss required for purposes of computing diluted earnings per share.

At December 31, 2013 and 2012, we excluded the outstanding securities summarized below, which entitle the holders thereof to acquire shares of common stock, from our calculation of earnings per share, as their effect would have been anti-dilutive.

	December 31,	
	2013	**2012**
Convertible Notes	5,509,769	6,078,734
Warrants	8,539,367	9,314,720
Stock Options	5,689,498	4,606,998
Total	**19,738,634**	**20,000,452**

Stock-Based Compensation

We periodically issue stock options and warrants to officers, directors and consultants for services rendered under our 2010 Stock Incentive Plan. We also assumed stock options in connection with the reverse merger consummated on May 13, 2010 which are not issued under any stockholder approved option plan. Options vest and expire according to terms established at the grant date. We account for share-based payments to officers and directors by measuring the cost of services received in exchange for equity awards based on the grant date fair value of the awards, with the cost recognized as compensation expense in our financial statements over the vesting period of the awards. We account for share-based payments to consultants and non-employees by determining the value of the stock compensation based upon the measurement date at either (a) the date at which a performance commitment is reached or (b) at the date at which the necessary performance to earn the equity instruments is complete. Certain share based awards may contain milestones that need to be achieved before the option begins vesting. Management estimates the probability of achievement of such milestones at each reporting date in calculating the estimate of the share-based cost.

The fair value of the Company's common stock option grants is estimated using the Black-Scholes-Merton option pricing model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life of the common stock options, and future dividends. Compensation expense is recorded based upon the value derived from the Black-Scholes-Merton option pricing model, and based on actual experience. The assumptions used in the Black-Scholes-Merton option pricing model could materially affect compensation expense recorded in future periods.

Derivative Financial Instruments

We evaluate all of our financial instruments to determine if such instruments are derivatives or contain features that qualify as embedded derivatives. For derivative financial instruments that are accounted for as liabilities, the derivative instrument is initially recorded at its fair value and is then re-valued at each reporting date, with changes in the fair value reported in the consolidated statements of operations. For stock-based derivative financial instruments, we use a weighted-average Black-Scholes-Merton option pricing model which approximates a Monte Carlo model to value the derivative instruments at inception and on subsequent valuation dates. The classification of derivative instruments, including whether such instruments should be recorded as liabilities or as equity, is evaluated at the end of each reporting period. Derivative instrument liabilities are classified in the balance sheet as current or non-current based on whether or not net-cash settlement of the derivative instrument could be required within 12 months of the balance sheet date.

Revenue Recognition

As of December 31, 2013, we have not generated any revenues from the development of our intellectual property ("IP") and are therefore still considered a development stage company.

Fair Value of Financial Instruments

Effective January 1, 2008, fair value measurements are determined by our adoption of authoritative guidance issued by the FASB, with the exception of the application of the statement to non-recurring, non-financial assets and liabilities as permitted. The adoption of the authoritative guidance did not have a material impact on our fair value measurements. Fair value is defined in the authoritative guidance as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. A fair value hierarchy was established, which prioritizes the inputs used in measuring fair value into three broad levels as follows:

Level 1—Quoted prices in active markets for identical assets or liabilities.

Level 2—Inputs, other than the quoted prices in active markets, are observable either directly or indirectly.

Level 3—Unobservable inputs based on our assumptions.

We are required to use observable market data if such data is available without undue cost and effort.

At December 31, 2013 and December 31, 2012, the fair values of cash and cash equivalents, and accounts payable approximate their carrying values.

Recently Issued Accounting Standards

In January 2013, the FASB issued Accounting Standard Update ("ASU") 2013-01, Balance Sheet (Topic 210): Clarifying the Scope of Disclosures about Offsetting Assets and Liabilities. This ASU clarifies which instruments and transactions are subject to the offsetting disclosure requirements established by ASU 2011-11. This guidance is effective for annual and interim reporting periods beginning January 1, 2013. The Company does not believe the adoption of this update will have a material effect on its financial position and results of operations.

On March 4, 2013, the FASB issued ASU 2013-05, "Foreign Currency Matters (Topic 830): Parent's Accounting for the Cumulative Translation Adjustment upon Derecognition of Certain Subsidiaries or Groups of Assets within a Foreign Entity or of an Investment in a Foreign Entity" ("ASU 2013-05"). ASU 2013-05 updates accounting guidance related to the application of consolidation guidance and foreign currency matters. This guidance resolves the diversity in practice about what guidance applies to the release of the cumulative translation adjustment into net income. This guidance is effective for interim and annual periods beginning after December 15, 2013. The Company does not believe the adoption of this update will have a material effect on its financial position and results of operations.

In July 2013, the FASB issued ASU No. 2013-11, Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Loss, or a Tax Credit Carryforward Exists. Topic 740, Income Taxes, does not include explicit guidance on the financial statement presented of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. There is diversity in practice in the presentation of unrecognized tax benefits in those instances and the amendments in this update are intended to eliminate that diversity in practice. The amendments are effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. The amendments should be applied prospectively to all unrecognized tax benefits that exist at the effective date. Early adoption is permitted. The Company does not believe the adoption of this update will have a material effect on its financial position and results of operations.

Other accounting pronouncements did not or are not believed by management to have a material impact on the Company's present or future consolidated financial statements.

3. 2.5% SENIOR SECURED CONVERTIBLE NOTES PAYABLE

Convertible notes payable consist of the following as of December 31, 2013 and December 31, 2012:

	December 31, 2013	December 31, 2012
2010 Convertible Notes	$427,500	$427,500
2012 Convertible Notes	1,170,333	1,335,333
	$1,597,833	$1,762,833
Less Valuation Discount	(844,577)	(1,402,030)
Convertible Notes Payable, net	$753,256	$360,803

2010 Convertible Notes

On May 13, 2010, we entered into a Securities Purchase Agreement with W-Net Fund I, L.P. ("W-Net"), Europa International, Inc. ("Europa") and MKM Opportunity Master Fund, Ltd. ("MKM" and together with W-Net and Europa, the "Purchasers"), pursuant to which the Purchasers, on May 13, 2010, purchased from us (i) 2.5% Senior Secured Convertible Notes (the "Original Notes") for a cash purchase price of $1,500,000, and (ii) Common Stock Purchase Warrants pursuant to which the Purchasers may purchase up to 1,908,798 shares of our common stock at an exercise price equal to approximately $0.39 per share (the "Capital Raise Transaction").

The Original Notes accrued 2.5% interest per annum with a maturity of 4 years after the closing of the Capital Raise Transaction. No cash interest payments were required, except that accrued and unconverted interest is due on the maturity date and on each conversion date with respect to the principal amount being converted, provided that such interest may be added to and included with the principal amount being converted. If there is an uncured event of default (as defined in the Original Notes),), of which one event of default would be the departure of Thomas Gardner without us obtaining a suitable full-time replacement within 90 days of such departure, the holder of each Original Note may declare the entire principal and accrued interest amount immediately due and payable. Default interest will accrue after an event of default at an annual rate of 12%. If there is an acceleration, a mandatory default amount equal to 120% of the unpaid Original Note principal plus accrued interest may be payable.

The warrants may be exercised on a cashless basis under which a portion of the shares subject to the exercise are not issued in payment of the purchase price, based on the then fair market value of the shares.

The Original Notes may not be prepaid, or forced by us to be converted in connection with an acquisition of our Company, except in a limited case more than a year after the Original Note issuance where the average of our stock trading price for 30 days on a national trading market other than the OTC Bulletin Board ("OTCBB") is at least three times the conversion price, in which event, and subject to the satisfaction of certain other requirements, the Original Note holders may elect to receive at least double the unpaid principal amounts in cash and other requirements are satisfied. In such a limited case acquisition, there could also be a forced cashless exercise of the warrants subject to similar requirements and optional cash payments to the warrant holders of at least double the exercise prices of their warrants.

The Original Notes greatly restrict the ability of the Company or AtheroNova Operations to issue indebtedness or grant liens on our or its respective assets without the Original Note holders' consent. They also limit and impose financial costs on our acquisition by any third party.

On May 13, 2010, we also entered into a Security Agreement and an Intellectual Property Security Agreement with the Purchasers and AtheroNova Operations, pursuant to which all of our obligations under the Original Notes are secured by first priority security interests in all of our assets and the assets of AtheroNova Operations, including intellectual property. Upon an event of default under the Original Notes or such agreements, the Original Note holders may be entitled to foreclose on any of such assets or exercise other rights available to a secured creditor under California and Delaware law. In addition, under a Subsidiary Guarantee, AtheroNova Operations will guarantee all of our obligations under the Notes.

On July 6, 2011, we entered into the First Amendment and Exchange Agreement with each of W-Net, Europa and MKM pursuant to which the Purchasers agreed to exchange the Original Notes for the Amended and Restated 2.5% Senior Secured Convertible Notes (the "Amended Notes"). The Amended Notes had the same terms as the Original Notes (as described above), except that each Amended Note was convertible at any time into common stock at a per share conversion price of $0.29, subject to adjustment.

On June 15, 2012, the Company entered into the Second Amendment and Exchange Agreement with each W-Net, Europa and MKM pursuant to which the Purchasers agreed to exchange the Amended Notes for Second Amended and Restated 2.5% Senior Secured Convertible Notes (the "Second Amended Notes"). The Second Amended Notes have the same terms as the Amended Notes (as described above) except as follows: (i) each Second Amended Note has an automatic conversion provision and removal of the applicable beneficial ownership limitations effective the later of 61 days following the Company's notice to the Purchasers of its application to list or quote its securities on a national securities exchange or the date immediately prior to the effective date of the Company's listing or quotation of its securities on the applicable exchange; (ii) the price-based anti-dilution provisions contained in the Amended Notes have been removed; and (iii) under the Securities Purchase Agreement, as currently amended, if we met two specified operating benchmarks during the first twenty-nine months after the closing of the first Senior Note purchase, an additional $1,500,000 in note purchases, substantially in the form of the Second Amended Notes (without warrants),

could be requested by us from the Purchasers. The determination of whether we had met the benchmarks was solely at the discretion of the Purchasers. If the benchmarks were determined to have been achieved, then we could have required the Purchasers to make the additional $1,500,000 of note purchases. If such benchmarks were not attained in the 29-month period or we did not exercise the option to request the additional notes, then the Purchasers, in their discretion, during the next 10 days may elect to purchase up to $1,500,000 of notes, substantially in the form of the Second Amended Notes (without warrants), having an initial conversion price which is 100% of the conversion price in the Second Amended Notes. On July 23, 2012 the Purchasers notified us of their intention of putting the additional $1,500,000 in notes in 3 tranches (see 2012 convertible notes below).

The Company considered the amendment of the note resulted in a modification for accounting purposes with no change to the net book value of notes as the value of the note's conversion feature and attached warrants were not changed. Furthermore, the derivative liability recorded when the notes and warrants were originally issued were deemed extinguished. At December 31, 2011, the balance of the outstanding notes was $955,351.

During the year ended December 31, 2012, principal in the amount of $527,851 was converted at a per share price of $0.29 into 1,820,572 shares of our common stock. In addition, the Company also issued 107,269 shares of our common stock with a market value of $69,552 to settle $31,191 of accrued interest relating to these notes. The issuance of these common shares resulted in an additional charge of $38,372 that has been reflected as part of interest expense in the accompanying 2012 statement of operations. The balance of these Senior Notes outstanding as of December 31, 2013 and 2012 amounted to $427,500 respectively. The notes are due on May 12, 2014 and have been reclassified as a current liability in the 2013 balance sheet. During the year ended December 31, 2013 and 2012, the Company recognized interest expense of $10,836 and $20,098, respectively based on the 2.5% interest rate of the note.

Upon issuance of the Original Notes, the Company accounted for the Original Notes and the attached warrants as a derivative liability and determined that the fair value of the conversion feature to be $2,370,245, and the fair value of the warrant to be $1,172,103, based on a weighted average Black-Scholes-Merton calculation. The Company recorded the full value of the derivative as a liability at issuance with an offset to valuation discount, which is being amortized over the life of these notes. As the aggregate fair value of these liabilities of $3,542,348 exceeded the aggregate value of these notes of $1,500,000 at issuance, the excess of the liability over the aggregate value of these notes of $2,042,348 was considered as a cost of the private placement in 2010. The note discount is being amortized to interest expense over the term of the notes. At December 31, 2011, the unamortized note discount was $559,696.

During the year ended December 31, 2013 and 2012, the Company amortized note discount amounting to $106,878 and $415,444 respectively, which is included in interest expense. At December 31, 2013 and 2012, the unamortized note discount was $37,375 and $144,252 respectively.

2012 Convertible Notes

On July 23, 2012 the Purchasers notified us of their intention of putting the additional $1,500,000 in notes, substantially in the form of the second Amended Notes (without warrants) (the "Additional Notes" and together with the Original Notes, the Amended Notes and the second Amended Notes, the "Senior Notes"), in 3 tranches. The first $500,000 was put to us and we issued Notes on September 4, 2012. These Notes mature on September 3, 2016. The second tranche of $498,333 was put to us and we issued Notes on October 1, 2012 that matures on September 30, 2016. The final tranche of $500,000 was put to us and we issued Notes on October 31, 2012 that matures on October

30, 2016, for an aggregate issuance of $1,498,333 during the year ended December 31, 2012. The Additional Notes are convertible into common stock at a per share price of $0.29 per share.

During the year ended December 31, 2012, $163,000 of these notes was converted into 561,672 shares of our common stock. In addition, the Company also issued 4,206 shares of our common stock with a market value of $2,727 to settle $1,210 of accrued interest relating to these notes. The issuance of these common shares resulted in an additional charge of $1,505 that has been reflected as part of interest expense in the accompanying 2012 statement of operations. The balance of these Senior Notes outstanding as of December 31,2012 was $1,335,333. During the year ended December 31, 2013, $165,000 of these notes was converted into 568,965 shares of our common stock. In addition, the Company also issued 47,942 shares of our common stock with a market value of $4,765 to settle $2,303 of accrued interest relating to these notes. The issuance of these common shares resulted in an additional charge of $2,462 that has been reflected as part of interest expense in the accompanying 2013 statement of operations. The balance of these Senior Notes outstanding as of December 31, 2013 amounted to $1,170,333.

During the year ended December 31, 2013 and 2012, the Company recognized interest expense of $30,914 and $9,605 respectively based on the 2.5% interest rate of the note.

As the market price on the date of the issuance of the Additional Notes ranged between $0.58 and $0.80 per share, the Company calculated a beneficial conversion feature up to the face value of these notes in the aggregate of $1,498,333 representing the difference between the market price and the exercise price on the date of issuance. The beneficial conversion feature was recorded as a valuation discount and is being amortized over the term of these notes. During the year ended December 31, 2013 and 2012, the Company amortized note discount amounting to $450,575 and $240,555 respectively, which is included in interest expense. As of December 31, 2013 and 2012, the unamortized note discount was $807,203 and $1,257,778 respectively.

Convertible notes purchased and held by Europa International, Inc. were $1,094,167 and $1,094,167 as of December 31, 2013 and 2012, respectively. Europa is an entity controlled by Knoll Capital Management of which Mr. Knoll, one of the Company's directors, is the managing director.

4. CardioNova Research Agreement

In October 2011, we entered into two definitive agreements with OOO CardioNova, a wholly-owned subsidiary of Maxwell Biotech Group, a Russian biotech fund, covering our AHRO-001 compound. The agreements cover a territory represented by the Russian Federation, the Ukraine and various countries in central Asia (the "Territory").

Under the Licensing Agreement, OOO CardioNova ("CardioNova") became an equity investor in our Company in exchange for the funding of Phase 1 and 2 human clinical trials conducted by a Clinical Research Organization ("CRO") located in Russia. Pursuant to the agreement, a Joint Steering Committee was established between both entities and determined final clinical protocols and a research budget of $3.8 million. Pursuant to the agreement, common stock equal to 10%, 20%, 40%, and 30% of the research budget of $3.8 million will be issued to CardioNova upon achievement of four research and testing milestones. The shares to be issued will be determined based upon a 20 day average price prior to issuance up to $0.97/share.

For accounting purposes, the costs to be incurred in connection with this agreement are considered compensatory and are recognized as a Research and Development expense. Recognition of these costs as expense will generally occur when certain development projects are commenced and performance milestones become probable of achievement and are deemed earned.

During 2012, we reviewed the clinical development milestones as to their probability of achievement and, if probable, the estimated percentage of completion of the milestone. As of December 31, 2012, we determined that none of the milestones had a probable likelihood of achievement and therefore we recorded no estimated expense during 2012.

During 2013, several clinical development milestones were considered probable or were achieved. Upon acceptance of the development plan which occurred on April 25, 2013, 391,753 shares of common stock, representing 10% of the research budget of $3.8 million as specified for the first milestone, were issued to CardioNova at a 20-day weighted average prior to signature of the initial term sheet, or $0.97 per share. On April 29, 2013 the Russian Ministry of Healthcare approved the protocol submitted on January 22, 2013, upon which the Joint Steering Committee had based the Phase 1 protocol. Accordingly, 1,605,408 shares of our common stock were issued at the weighted 20-day average of $0.4734, representing 20% of the approved budget.

Significant judgment is required in assessing when a performance milestone is probable of achievement and estimating the timing of when the performance of these milestones will be completed. These determinations are based on discussions between the Company and CardioNova personnel that address qualitative and quantitative factors, including, but not limited to, overall complexity associated with the assessment, stage of the clinical trial, progress made to date, results of testing, and consideration of the nature of the work remaining in the trial(s). We have completed the evaluation of the performance of the two remaining milestones as of December 31, 2013. The milestones specify that additional common stock issuances of 40% and 30% of the approved budget shall be issued upon the announcement of Phase 1 results and announcement of Phase 2 results, respectively. Each tranche will be priced at the lower of the weighted 20-day average immediately prior to each issuance event, or $0.97 per share, whichever is lower. Our review of the progress by CardioNova on the milestone relating to Phase 1 work was estimated at approximately 80% completed and we determined that the achievement of the milestone was probable. As a result, we accrued $1,170,712 based upon the December 31, 2013 fair value of the estimated shares of common stock issuable at the end of fiscal year 2013 and we recorded that amount as part of Research and development – related party in the 2013 Statement of Operations. A corresponding liability for the estimate of the fair value of the shares to be issued is shown as a liability below long term liabilities as it is only payable in shares of common stock, in our consolidated balance sheets as of December 31, 2013. The remaining value will be recognized as Research and Development expense in future periods based on actual progress toward this milestone and any variation of the actual total value of common stock issued or issuable upon future valuation measurement dates or upon completion of the milestone when compared to this periodic estimate will be expensed or credited to our statement of operations.

As of December 31, 2013, the final milestone relating to the Phase 2 clinical trial calling for additional issuance of our common stock is currently not yet believed to be probable of achievement and no estimated liability or expense has been recorded.

If CardioNova successfully develops and commercializes AHRO-001 in the Territory, we will be entitled to receive a quarterly royalty, based on net sales during the period using an escalating scale. The royalty agreement shall remain in force for the period in which intellectual property rights for AHRO-001 are in full force and effect in the Territory. As of December 31, 2013, no royalty has been recorded as AHRO-001 has not been successfully developed and commercialized.

Under the Securities Purchase Agreement, CardioNova purchased 275,258 shares of our common stock for a cash purchase price of $0.97 per share, which took place in two installments. The first installment, which took place on December 22, 2011, was for the issuance of 154,639 shares upon receipt of $150,000 as specified in the Licensing Agreement. The 2nd installment of 120,619 shares took place on June 14, 2013 upon delivery of final clinical product to be used in Phase 1 clinical trials for proceeds of $117,000.

5. Research and Development Projects

We have a research agreement signed in September 2012, amended in April 2013 and again in September 2013, with a major university in Southern California to conduct contract research in additional compounds covered under our pending patents. This agreement calls for payment of all research costs relating to the study of dosage and efficacy of bile acids on the atherosclerotic plaque in a non-human model. The total cost of the amended project was $236,323, paid in four installments over the estimated one year length of the study. During the year ended December 31, 2013 and 2012, we recorded $120,327 and $115,996, respectively, to Research and Development expense pursuant to the agreement. The final report on this research project was received in early 2014.

The Company has multiple testing agreements signed in 2012 and in August 2013 for testing of the oral toxicity of AHRO-001 in non-human models. Each agreement can be terminated anytime and there are no commitments or guarantees other than to reimburse costs incurred prior to termination.

A study initiated in September 2012, with a cost of approximately $507,000, has been completed and final research reports were received during 2013. Project costs of $389,785 and $116,545 have been recorded as part of Research and Development expense on the accompanying statement of operations for the year ended December 31, 2013 and 2012 respectively.

Studies authorized in August 2013, with a cost of approximately $224,600, have both completed the active phase of testing and are in the initial data analysis stage of the projects. The process is ongoing and to date, $175,950 has been expensed, all of which has been recorded as part of Research and development expense on the accompanying statement of operations for the year ended December 31, 2013. The remaining costs of approximately $49,000 will be recorded in future period once the service has been rendered.

We had a development agreement with a Pennsylvania-based Clinical Research Organization (“CRO”) specializing in formulation and manufacturing of clinical research grade pharmaceutical products. The agreement called for the CRO to use our API to formulate and manufacture Phase1 and 2 clinical trial pharmaceutical products. The total cost of the project was $385,000, paid in progress installments over the length of the development and compounding process. The process was completed upon shipment of clinical supplies to Russia and during the year ended December 31, 2013. The Company recognized $166,422 and $218,847 pursuant to the agreement which was recorded as part of Research and Development expense on the accompanying consolidated statement of operations for the years ended December 31, 2013 and 2012 respectively.

During the year ended December 31, 2013 and 2012, we recorded additional research and development expense of $1,177,801 and $534,873 respectively representing fees paid to research and development consultants, purchase of testing materials, development of tablet formulation services and other testing costs and fees incurred.

6. COMMITTMENTS

Facility Lease Agreement

In June 2012, we entered into a 69 month lease agreement, on existing and expansion office space, with a final amended commencement date of October 1, 2012 on a 66 month term. The total occupancy encompasses 1,930 square feet of general use office space. Monthly rent started at $3,570 per month and annual escalators will increase the rent to $4,053 per month in the final year of the lease. This office space will continue to be our administrative and corporate headquarters. During the year ended December 31, 2013, the Company recognized $47,214 in rent expense pursuant to this agreement.

The following table presents the minimum future rent obligations under the lease agreement:

	2014	2015	2016	2017	2018	Thereafter
Minimum future payments	$44,873	$46,030	$47,189	$48,346	$12,159	--

7. STOCKHOLDERS' EQUITY (DEFICIT)

In March 2013, a controlling stockholder sold a total of 1,624,999 shares of common stock to certain directors of the Company. As the shares of common stock were sold at a price lower than the market price, the Company considered this transaction as contribution of capital and recorded compensation expense amounting to $422,500 to record the difference between the sales price and market price at the date of sale. In addition, the controlling stockholder also transferred, at no cost, 95,000 shares of common stock to certain officers and directors of the Company. The Company considered this transaction as contribution of capital and recorded compensation expense amount to $58,900 to account for the fair value of the shares of common stock at the date of transfer.

Common Stock

2013

During the year ended December 31, 2013, we sold 800,002 units for $0.65 per unit, each unit consisting of one share of common stock and a warrant to purchase 0.30 shares of common stock resulting in proceeds to us of $520,001. There were no commissions paid on this transaction. The sale of these units resulted in the issuance of 800,002 shares of our common stock and the issuance of warrants to acquire 240,001 shares of our common stock. The warrants are exercisable up to ten years from the date of issuance at a price of $0.75 per share.

During the year ended December 31, 2013, holders of warrants to purchase 672,855 shares of our common stock at $0.223 exercised the warrants, resulting in cash proceeds to us of $150,047.

During the year ended December 31, 2013, a director of the Company and a holder of a warrant to purchase 336,427 shares of our common stock at $0.223 exercised the warrant on a “cashless exercise” basis, resulting in issuance of 186,380 shares of our common stock and cancellation of 150,047 shares purchasable under the warrant.

During the year ended December 31, 2013, we sold 120,619 shares of our common stock to CardioNova under the Securities Purchase Agreement resulting in proceeds to us of $117,000 or $0.97 per share. There were no commissions paid on this transaction. (see Note 4).

During the year ended December 31, 2013, we issued an aggregate of 1,997,161 shares of our common stock valued at $0.73 per share, or $1,198,297 to CardioNova in consideration for the achievement of milestones under the 2011 Licensing Agreement (see Note 4). The shares issued were valued at the trading price on the approval date of the Company’s Board of Directors and recorded as part of research and development expenses.

During the year ended December 31, 2013, we issued an aggregate of 576,907 shares of our common stock pursuant to the conversion of the Company’s 2.5% Senior Secured Convertible Notes Payable amounting to $165,000 and accrued interest of $2,303 (see Note 3). Additionally, the Company also recognized an additional charge of $2,462 as part of interest expense in the accompanying statement of operations to account for the current market price of the shares issued to settle the unpaid interest.

During the year ended December 31, 2013, we issued 6,456 shares of our common stock valued at $4,518 to settle accounts payable with a balance of $4,200 to a director of the Company. The shares issued were valued at the trading price at the date of issuance and the difference over the accounts payable balance of $318 was recognized as part of General and Administrative Expenses on the accompanying consolidated statement of operations.

2012

During the year ended December 31, 2012, we sold 4,480,000 units for $0.50 per unit, each unit consisting of one share of common stock and a warrant to purchase 0.50 shares of common stock resulting in proceeds to us of $2,061,787 after payment of commissions $161,800 to a placement agent and $16,413 in various legal and miscellaneous fees directly associated with these sales. The sale of these units resulted in the issuance of 4,480,000 shares of our common stock and the issuance of warrants to acquire 2,240,000 shares of our common stock. The warrants are exercisable up to four years from the date of issuance at a price of $0.625 per share. Warrants to acquire up to 99,600 shares of common stock at the same terms were also issued to our placement agent. Due to the principals of the placement agent also being holders of the 12% Convertible Notes Payable, commissions of $54,800 were also paid to them on the short term notes converted to common stock (see Note 3).

During the year ended December 31, 2012, we issued an aggregate of 459,600 shares of our common stock valued at $256,100 at prices ranging between $0.62 and $1.01 per share in exchange for services provided. The shares issued were valued at the trading price at the date of the agreements.

During the year ended December 31, 2012, we issued an aggregate of 1,370,000 shares of our common stock pursuant to the conversion of the Company’s Short Term 12% Convertible Notes Payable amounting to $685,000 (see Note 10).

During the year ended December 31, 2012, we issued an aggregate of 2,493,719 shares of our common stock pursuant to the conversion of the Company’s 2.5% Senior Secured Convertible Notes Payable amounting to $690,851 and accrued interest of $32,401 (see Note 3). Additionally, the Company also recognized an additional charge of $39,878 as part of interest expense in the accompanying statement of operations to account for the current market price of the shares issued to settle the unpaid interest.

During the year ended December 31, 2012, we issued 30,061 shares of our common stock valued at $23,748 to settle accounts payable with a balance of $19,269. The shares issued were valued at the trading price at the date of issuance and the difference over the accounts payable balance of $4,479 was recognized as part of General and Administrative Expenses on the accompanying consolidated statement of operations.

In March 2012 a controlling stockholder transferred a total of 115,000 shares of common stock to directors, officers, employees and service providers of the Company. Compensation expense totaling $123,050 was recognized on the date of approval of the transfers based upon the market value of the shares on the approval date.

Stock Options

We have a stockholder-approved stock incentive plan for employees under which we have granted stock options. In May 2010, we established the 2010 Stock Incentive Plan (the “2010 Plan”), which provides for the granting of awards to officers, directors, employees and consultants to purchase or acquire up to 4,362,964 shares of our common stock. The plan was amended in 2013 to increase the number of shares authorized under the plan up to 7,362,964 shares of our common stock. The awards have a maximum term of 10 years and vest over a period determined by the administrator of the 2010 Plan and are issued at an exercise price determined by the administrator. Options issued under the 2010 Plan will have an exercise price equal to or greater than the fair market value of a share of our common stock at the date of grant. The 2010 Plan expires on May 20, 2020 as to any further granting of options. At the year ended December 31, 2013 there were options to purchase up to 4,340,000 shares of the Company’s common stock granted and outstanding under the 2010 Plan.

We have granted options to individual employees, directors, and consultants pursuant to our 2010 Plan that was approved by stockholders. In addition, we assumed options granted by AtheroNova Operations to its employees prior to the Merger. The assumption of these options was not approved by our stockholders.

The following table provides information, as of December 31, 2013, with respect to all stock option compensation arrangements.

Plan Category	Number of securities to be issued upon exercise of outstanding options, and rights (a)	Weighted-average exercise price of outstanding options, and rights (b)	Number of securitiesremaining available forfuture issuance under equity compensation plans (excluding securities reflected in column (a) (c)
Equity compensation plans approved by stockholders	4,340,000	$ 0.97	3,022,964
Equity compensation plans approved by the Board of Directors	1,349,498	0.39	--
Total	5,689,498	$ 0.83	3,022,964

2013

During the year ended December 31, 2013, options to purchase an aggregate of 502,500 shares of the Company's common stock were granted under the 2010 Plan to an employee and members of the Company's Board of Directors valued at $258,497 using the Black-Scholes-Merton option pricing model. The options have an exercise price of $0.43 up to $0.69 per share, vest over a three to four year period and expire seven years from the date of grant. During the period ended December 31, 2013, the Company recognized compensation costs of $52,652 based on the vesting of these options.

During the year ended December 31, 2013, options to purchase 1,580,000 shares of the Company's common stock were granted to consultants valued at $881,688 using the Black-Scholes –Merton calculation. The options have an exercise price of $0.43 up to $0.69 per share, vest over a four year period and expire seven years from the grant date. During the year ended December 31, 2013, the Company recognized compensation expense of $98,094 based on the vesting of these options.

In May 2011, the Company granted a consultant a total of 1,500,000 options to purchase share of the Company's common stock at $1.01/share. These options would only become fully vested upon achievement of certain milestones and will expire seven years from the date of grant. At the beginning of 2013, a total of 1,350,000 options remained unvested. In March and May 2013, certain milestones were achieved resulting in a total of 350,000 options becoming fully vested and the Company recognized compensation costs of $117,257 based on the fair value of these options using the Black-Scholes-Merton calculation. In June 2013, the Company and the consultant agreed to cancel the remaining unvested options to purchase 1,000,000 shares of common stock at $1.01 per share.

During the year ended December 31, 2013, we recognized an additional $596,676 of compensation costs related to the vesting of approximately 4.6 million options granted to other employees and directors in prior years. As of December 31, 2013, the total compensation cost related to nonvested option awards not yet recognized was $1,183,387. The weighted average period over which it is expected to be recognized is approximately 0.88 years.

2012

During the year ended December 31, 2012, options to purchase an aggregate of 100,000 shares of the Company's common stock were granted to directors under the 2010 Plan. The options vest 25% upon issuance, and then vest 25% on each anniversary date thereafter until fully vested. The options have an average exercise price of $1.00 per share and expire on the 7th anniversary of the date of grant. The options were valued using the Black-Scholes-Merton option pricing model at $88,500 of which $38,124 was expensed during the year ended December 31, 2012 based upon the options' vesting schedules.

In June 2012, the exercise price of options granted to a consultant in fiscal 2011 to purchase an aggregate of 1,500,000 shares of the Company's common stock at an average price per share of $1.25 were repriced to $1.01 per share to reflect the contractual intent to grant all shares under the contract at the time of initiation of the consulting contract. The closing price of the Company's common stock on the date of the adjustment was $0.79. During the year ended December 31, 2012, the Company recognized a total of $219,015 in stock compensation expense based upon the vesting of these options using the Black-Scholes-Merton option pricing model. Compensation expense to be recognize in future periods amounted to approximately $427,000. The weighted average period over which it is expected to be recognized is approximately 3.6 years.

During the year ended December 31, 2012, we recognized an additional $546,631 of compensation costs related to the vesting of approximately 4.5 million options granted to other employees and directors in prior years. As of December 31, 2012, the total compensation cost related to nonvested option awards not yet recognized was $1,304,110. The weighted average period over which it is expected to be recognized is approximately 3.5 years.

A summary of the status of our stock options as of December 31, 2013 and 2012 and changes during the periods then ended is presented below:

	Shares	Weighted average exercise price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at December 31, 2011	4,519,498	$ 1.129	6.163	$ 1,140,059
Granted	100,000	$ 1.000	6.500	--
Exercised	--	--	--	--
Cancelled	(12,500)	$ 1.110	--	--
Outstanding at December 31, 2012	4,606,998	$ 0.987	5.189	$119,241
Granted	2,082,500	$ 0.574	6.376	--
Exercised	--	--	--	--
Cancelled	(1,000,000)	$ 1.010	--	--
Outstanding at December 31, 2013	5,689,498	$ 0.832	4.849	$ 86,271
Exercisable at December 31, 2013	3,054,715	$ 0.952	3.942	$ 84,475

To compute compensation expense in 2013, we estimated the fair value of each option award on the date of measurement using the Black-Scholes-Merton option pricing model. In prior periods, the Company based the expected volatility assumption on a volatility index of publicly traded peer companies. During the current year, the Company determined that its stock price has matured and there is a consistent level of trading activity, as such, the Company used the volatility percentage of its common stock. The expected term of options granted represents the period of time that options are expected to be outstanding. We estimated the expected term of stock options by using the simplified method. The expected forfeiture rates are based on the historical forfeiture experiences. To determine the risk-free interest rate, we utilized the U.S. Treasury yield curve in effect at the time of measurement with a term consistent with the expected term of our awards. We have not declared a dividend on our common stock since its inception and have no intentions of declaring a dividend in the foreseeable future and therefore used a dividend yield of zero.

The following table provides detail with regard to options outstanding, vested and exercisable at December 31, 2013:

	Outstanding			Vested and Exercisable		
Price per share	Shares	Weighted-Average Price per Share	Weighted-Average Remaining Contractual Life (years)	Shares	Weighted-Average Price per Share	Weighted-Average Remaining Contractual Life (years)
$0.223 – $0.69	2,631,998	$ 0.501	5.69	612,430	$ 0.257	3.48
$0.70 – $1.25	2,797,500	$ 1.062	4.08	2,289,793	$ 1.064	4.05
$1.30 – $2.38	260,000	$ 1.723	4.57	179,992	$ 1.950	4.37
	5,689,498			3,082,215		

The following table shows the weighted average assumptions we used to develop the fair value estimates for the determination of the compensation charges in 2013:

	Year ended December 31,							
	2013				2012			
Expected volatility	113	-	226	%	111	-	134	%
Dividend yield		--				--		
Expected term (in years)	5.50	-	6.25		1.75	-	6.25	
Risk-free interest rate	1.38	-	2.09	%	1.19	-	1.41	%

Warrants

2013

During the year ended December 31, 2013 as part of our sale of units of our common stock, we issued 240,001 warrants to purchase shares of our common stock. The warrants have a ten year term from the date of purchase of the unit and are exercisable at $0.755 per share.

During the year ended December 31, 2013 we issued warrants to a service provider to purchase 50,000 shares of our common stock. The warrants vest immediately, had a term of three years and are exercisable at a purchase price of

$0.50. the warrants were valued using the Black-Scholes-Merton option pricing model at $13,500 with the following assumptions risk free interest rate of 0.40%, dividend yield of 0%, volatility factors of the expected market price of common stock of 114%, and an expected life of 2.5 years.

During the year ended December 31, 2013, a holder of warrants to purchase 560,713 shares of our common stock at $0.223 per share exercised the warrant, resulting in cash proceeds to the Company of $125,039 and issuance of the shares upon receipt of the purchase price.

During the year ended December 31, 2013 a director of the Company and holder of a warrant to purchase 336,427 shares of our common stock at $0.223 exercised the warrant on a “cashless exercise” basis, resulting in issuance of 186,363 shares of our common stock and cancellation of 150,064 shares purchasable under the warrant. The Company did not receive any cash proceeds as a result of this transaction.

During the year ended December 31, 2013 a holder of warrants to purchase 112,142 shares of our common stock at $0.223 per share exercised the warrant, resulting in cash proceeds to the Company of $25,007 and issuance of the shares upon receipt of the purchase price.

2012

During the year ended December 31, 2012 as part of its sale of units of its common stock, we issued 2,240,000 warrants to purchase shares of our common stock. The warrants have a 4 year term from the date of purchase of the unit and are exercisable at $0.625 per share.

On May 15, 2012, we issued 140,000 warrants to the purchasers of the short term 12% notes issued as of that date. The warrants are exercisable at $0.90 per share with the provision to adjust the purchase price based on the issuance price of the private placement in process at the time of the issuance of the notes and a term of 66 months from the date of the original issuance. The fair value of the warrants amounted to $58,387 using a Black-Scholes-Merton option pricing model and was recognized as a note discount upon its issuance and amortized in full to interest expense based upon the original term of the notes. In October 2012 concurrent with the closing of the private placement, the warrants were repriced to $0.575 to reflect the transaction price. As a result, we recognized an additional cost of $34,220 to account for the fair value of these revalued warrants as part of Changes to short-term notes and warrants in the accompanying consolidated statements of operations. See Note 3.

In October 2012, we issued a total of 685,000 warrants to purchase shares of our common stock in conjunction with the conversion of our short term 12% convertible notes payable. The warrants have a 4 year term from the date of purchase of the unit and are exercisable at $0.625 per share. Total fair value of the warrants issued were calculated to be $420,863 using the Black-Scholes-Merton option pricing model and was recorded as part of Changes to 12% Notes and Warrants in the accompanying consolidated statements of operations.

The following table provides detail with regard to warrants outstanding, vested and exercisable at December 31, 2013:

	Outstanding			Vested and Exercisable		
Price per share	**Shares**	**Weighted-Average Price per Share**	**Weighted-Average Remaining Contractual Life (years)**	**Shares**	**Weighted-Average Price per Share**	**Weighted-Average Remaining Contractual Life (years)**
$0.223	2,130,706	$ 0.223	1.20	2,130,706	$ 0.223	1.20
$0.393	1,908,798	$ 0.393	0.42	1,908,798	$ 0.393	0.42
$0.50	71,000	$ 0.500	1.48	71,000	$ 0.500	1.48
$0.575	140,000	$ 0.575	3.83	140,000	$ 0.575	3.83
$0.60	923,862	$ 0.600	0.60	923,862	$ 0.600	0.60
$0.625	2,925,000	$ 0.625	2.75	2,925,000	$ 0.625	2.75
$0.75	240,001	$ 0.750	9.67	240,001	$ 0.750	9.67
$1.64	200,000	$ 1.640	2.00	200,000	$ 1.640	2.00
	8,539,367			8,539,367		

As of December 31, 2013 there are warrants to purchase 8,539,367 shares of our common stock outstanding with expiration dates ranging from February 2014 through August 2023 and exercise prices ranging from $0.22 to $1.64. A summary of the status of our warrants as of December 31, 2013 and 2012 and changes during the periods then ended is presented below:

Balance at December 31, 2011 (at $0.223-$1.64)	6,249,720
Granted (at $0.575 - $0.625)	3,065,000
Exercised	--
Balance at December 31, 2012 (at $0.223 - $1.64)	9,314,720
Granted (at $0.50 - $0.75)	290,001
Exercised	(859,235)
Cancelled	(206,119)
Ending balance at December 31, 2013 (at $0.223 - $1.64)	8,539,367

The intrinsic value of the warrants at December 31, 2013 was $334,521.

8. INCOME TAXES

Income Taxes

The provision for income taxes for the periods ended December 31, 2013, and 2012, was as follows (using a 42.8 percent effective Federal and state income tax rate):

	2013	**2012**
Current Tax Provision:		
Federal	$--	$--
State	1,365	1,365
Total current tax provision	$1,365	$1,365
Deferred Tax Provision:		
Federal and state		
Loss carryforwards	$(2,360,000)	$(933,000)
Valuation allowance	2,360,000	933,000
Total deferred tax provision	$--	$--

We had deferred income tax assets as of December 31, 2013, and 2012, as follows:

	2013	2012
Loss carryforwards	$(4,261,000)	$(1,901,000)
Less – valuation allowance	4,261,000	1,901,000
Total net deferred tax assets	$--	$--

As of December 31, 2013, we had net operating loss carryforwards for income tax reporting purposes of approximately $8,861,000 that may be offset against future taxable income. Current tax laws limit the amount of loss available to be offset against future taxable income when a substantial change in ownership occurs or a change in the nature of the business. Therefore, the amount available to offset future taxable income may be limited.

No tax benefit has been reported in our financial statements for the realization of loss carryforwards, as we believe there is high probability that the carryforwards will not be utilized in the foreseeable future. Accordingly, the potential tax benefits of the loss carryforwards are offset by a valuation allowance of the same amount.

We are primarily subject to U.S. federal and state income tax. As a result of the implementation of certain provisions of ASC 740, Income Taxes, (formerly FIN 48, Accounting for Uncertainty in Income Taxes – An Interpretation of FASB Statement No. 109), we performed an analysis of our previous tax filings and determined that there were no positions taken that we considered uncertain. Therefore, there were no unrecognized tax benefits as of December 31, 2013.

Future changes in the unrecognized tax benefit are not expected to have an impact on the effective tax rate due to the existence of the valuation allowance. We estimate that the unrecognized tax benefit will not change within the next twelve months. We will continue to classify income tax penalties and interest, if any, as part of interest and other expenses in our statements of operations.

9. DERIVATIVE LIABILITY

In April 2008, the FASB issued a pronouncement which provides guidance on determining what types of instruments or embedded features in an instrument held by a reporting entity can be considered indexed to its own stock for the purpose of evaluating the first criteria of the scope exception in the pronouncement on accounting for derivatives. This pronouncement was effective for financial statements issued for fiscal years beginning after December 15, 2008. The

adoption of these requirements can affect the accounting for warrants and many convertible instruments with provisions that protect holders from a decline in the stock price (or “down-round” provisions). For example, warrants with such provisions are no longer to be recorded in equity. Down-round provisions reduce the exercise price of a warrant or convertible instrument if a company either issues equity shares for a price that is lower than the exercise price of those instruments or issues new warrants or convertible instruments that have a lower exercise price.

We evaluated whether convertible debt and warrants to acquire our common stock contain such provisions that protect holders from declines in the stock price or otherwise could result in modification of the exercise price under the respective convertible debt and warrant agreements. We determined that the Senior Notes and warrants issued to W-Net, Europa and MKM in May 2010 as described in Note 3 contained such provisions and were recorded as derivative liabilities upon their issuance. FASB’s guidance requires the fair value of these liabilities be re-measured every reporting period with the change in value reported in the statements of operations.

On June 15, 2012, pursuant to the amendments of the Senior Notes and associated warrants as discussed in Note 3, we determined the conversion features of the notes and the exercise prices of the warrants were no longer required to be accounted for as a derivative liability due to the elimination of the price-based anti-dilution provisions contained in the Senior Amended Notes and warrants. As a result, the Company recognized the fair value of the derivative liability at the date of extinguishment of $3,472,549 as part of its contributed capital.

The derivative liabilities and restatement were valued using a probability weighted-average Black-Scholes-Merton option pricing model, which approximates the Monte Carlo and other binominal valuation techniques with the following assumptions:

	June 15, 2012 (Note & Warrant Amendment and Restatement Date)	
Conversion feature :		
Risk-free interest rate	0.29	%
Expected volatility	111	%
Expected life (in years)	1.87	
Expected dividend yield	0.00	%
Warrants :		
Risk-free interest rate	0.29	%
Expected volatility	111	%
Expected weighted average life (in years)	1.87	
Expected dividend yield	0.00	%

Fair Value :	
Conversion feature	$ 2,295,881
Warrants	1,176,668
	$ 3,472,549

The risk-free interest rate was based on rates established by the Federal Reserve Bank, expected volatility was based on a volatility index of peer companies as we did not have sufficient market information in 2012 to estimate the volatility of our own stock, and the expected life of the instruments was determined by the expiration date of the instruments. The expected dividend yield was based on the fact that we have not paid dividends to common stockholders in the past and do not expect to pay dividends to common stockholders in the foreseeable future.

During the year ended December 31, 2012, the Company recognized a gain of $97,975, to account for the corresponding extinguishment of derivative liability upon partial conversion of the principal balance of a convertible note into shares of common stock and recognized a gain of $2,640,497 to account for the change in the fair value of derivative liabilities. As of December 31, 2012, all such derivative liabilities had been extinguished.

10. 12 % CONVERTIBLE NOTES PAYABLE

On May 15, 2012, we entered into a Securities Purchase Agreement with ACT Capital Partners and Amir L. Ecker pursuant to which the purchasers, purchased from us (i) 12% Convertible Notes (“Bridge Notes”) for a cash purchase price of $700,000, and (ii) Common Stock Purchase Warrants pursuant to which the purchasers of Bridge Notes may purchase up to 140,000 shares of our common stock at an exercise price of $0.90 per share, subject to adjustment. The Bridge Notes are secured by the Company’s assets, accrued 12% interest per annum with a maturity date of September 30, 2012. On September 27, 2012 the maturity date of these Bridge Notes was extended to October 15, 2012. All other terms and conditions remained unchanged. No cash interest payments were required, except that accrued and unconverted interest would be due on the maturity date and on each conversion date with respect to the principal amount being converted, provided that such interest could be added to and included with the principal amount being converted. Upon the occurrence of an event of default (as defined in the Bridge Notes), the holder of each Bridge Note could have declared the entire principal and accrued interest amount immediately due and payable. Total proceeds received amounted to $645,200, net of commission fee of $54,800.

Upon issuance of the Bridge Notes, we calculated the fair value of the warrants to be $58,387 that was determined using a Black-Scholes-Merton option pricing model with the following assumptions: stock price of $0.55; exercise price of $0.90; term of 5.5 years; interest rate of 0.70%; dividend rate of 0%; and volatility of 113%. The fair value of the warrants and the commission fee, in the aggregate of $113,186, was recorded as a discount to the Bridge Notes and was amortized in full to interest expense over the original term of the Bridge Notes.

Each Bridge Note was convertible at any time into common stock at a specified conversion price, which was approximately $0.90 per share, subject to adjustment. The Company did not recognize a beneficial conversion feature upon issuance of the Bridge Notes as the conversion price was in excess of the trading price of its common stock at the date of the Bridge Note agreement.

The Bridge Notes could not be prepaid, or forced by us to be converted in connection with an acquisition of our company. In connection with an acquisition of our company the Bridge Notes could have been be assigned or sold by the holders or converted into equivalent equity in any acquiring company. The Bridge Notes were secured by a Subsidiary Guarantee and were subordinated to our senior notes to the amounts then outstanding under our senior notes.

In October 2012, the Company paid $15,000 of the note principal and converted the remaining principal balance of $685,000 to 1,370,000 shares of the Company's common stock at a conversion price of $0.50 per share. As such, there was no balance due on this note as of December 31, 2013. This conversion price was modified to $0.50 per share corresponded with the per unit price for the purchasers in a private placement closed by us in that month. The modified conversion price was considered an inducement to convert the notes. Accordingly, the Company recognized a beneficial conversion feature cost of $411,000 to account for the intrinsic value in the conversion price of the notes and the market price of the Company’s stock at the date of conversion. Furthermore, the warrants issued initially under the Securities Purchase Agreement as disclosed above were modified to $0.575 per share using the closing price of warrants issued in a concurrent private placement. As a result, the Company recognized an additional cost of $34,220 to account for the change in fair value of these revalued warrants.

Additionally, upon conversion of these notes, the Company granted these note holders additional warrants to purchase 685,000 shares of the Company’s common stock at $0.63 per share. The warrants are fully exercisable and will expire in four years. The Company considered these warrants as an inducement to the note holders to convert their notes into common stock. Total fair value of the warrants issued were calculated to be $420,863 using the Black-Scholes-Merton option pricing model with the following assumptions: stock price of $0.80; exercise price of $0.63; term of 4 years; interest rate of 1.4%; dividend rate of 0%; and volatility of 110%.

The aggregate of cost of $866,083 due to changes in the conversion price of the notes and issuance of additional warrants that have been reflected in the accompanying statement of operations for the year ended December 31, 2012. During the year ended December 31, 2012, the Company paid these note holders $32,666 for interest due.

11. SUBSEQUENT EVENTS

During January and February 2014, we entered into Securities Purchase Agreements with accredited investors under which the participants purchased, on February 12, 2014, $1,906,500 of our 6% Senior Secured Convertible Notes with associated warrants. In connection with this note placement, the Company paid cash commissions of $68,720 and issued 65,351 shares of common stock, with a fair value of $23,395, to an accredited broker that assisted in this note placement. The 6% Notes are secured by a first priority security interest of all assets of the Company and its subsidiaries, including intellectual property. The 6% Notes have a 3 year term and are convertible into common stock at any time at the lesser of i) $0.23 per share and ii) seventy percent of the average of the three lowest daily VWAPs occurring during the 20 consecutive trading days immediately preceding the applicable conversion date. Each purchaser also received a warrant with a 10 year life entitling the holder to purchase common stock representing 50% of the number of conversion shares of the purchased note at $0.23 per share. Additionally, as an incentive, the life of existing warrants held by participants in the Note purchase were extended to ten years from the date of each respective warrant's original issuance.

The 6% Notes and associated warrants included an anti-dilution provision that allows for the automatic reset of the conversion or exercise price upon any future sale of common stock instruments at or below the current conversion or exercise price, as applicable. We considered the current Financial Accounting Standards Board guidance of “Determining Whether an Instrument Indexed to an Entity’s Own Stock” which indicates that any adjustment to the fixed

amount (either conversion price or number of shares) of the instrument regardless of the probability or whether or not within the issuers' control, means the instrument is not indexed to the issuers own stock. Accordingly, we determined that the conversion price of the 6% Notes and the strike price of the associated warrants contain conversion or exercise prices, as applicable, that may fluctuate based on the occurrence of future offerings or events, and as such are not fixed amounts. As a result, we determined that the conversion features of the 6% Notes and the associated warrants are not considered indexed to our own stock and characterized the fair value of the 6% Notes and the associated warrants as derivative liabilities upon issuance.

Upon issuances, we determined that the fair value of the conversion feature of the 6% Notes and the associated warrants to be approximately $2,951,776 and $1,491,780, respectively based upon a weighted average Black-Sholes-Merton calculation. We will record the full value of the derivative as a liability at issuance with an offset to valuation discount, which will be amortized over the life of the 6% Notes. As the aggregate fair value of these liabilities of $4,443,556 exceeded the aggregate 6% Note value of $1,906,500 the excess of the liability over the 6% Note value of $2,537,056 will be considered as a cost of the private placement. Additionally, the Black-Scholes-Merton calculations of the value of each of the warrants immediately before and after the life extension resulted in a valuation increase of an aggregate of $564,849, which will be recorded and an additional cost of the private placement. The dervative liability will be revalued at each subsequent reporting date.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None

ITEM 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer, who serves as our principal executive officer and our Chief Financial officer, who serves as our principal financial and accounting officer, as appropriate, to allow timely decisions regarding required disclosure as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act.

As of December 31, 2013, our Chief Executive Officer and Chief Financial Officer conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of December 31, 2013, our disclosure controls and procedures were effective.

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 Rules 13a-15(f) and 15d-15(f) of the Exchange Act and for assessing the effectiveness of internal control over financial reporting.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2013. In making its assessment of internal control over financial reporting, management used the criteria established in Internal Control — Integrated Framework, issued by the Committee of Sponsoring Organizations of the Treadway Commission. This assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of those controls. Based on the results of this assessment, management has concluded that our internal control over financial reporting was effective as of December 31, 2013.

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, 2013 that have materially affected, or that are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

The following table sets forth the names, ages and positions of our current executive officers and directors as of February 17, 2014. All directors serve until the next annual meeting of stockholders or until their successors are elected and qualified. Officers are appointed by our board of directors and their terms of office are, except to the extent governed by an employment contract, at the discretion of our board of directors.

Name	Age	Position Held
Thomas W. Gardner	60	Chairman, Chief Executive Officer and President
Mark Selawski	58	Chief Financial Officer and Secretary
Gary Freeman	46	Director and Chairman of the Audit Committee
Boris Ratiner, M.D.	46	Director and Chairman of the Medical Committee
Paul DiPerna	55	Director and Chairman of the Compensation Committee
Alexander Polinsky, Ph.D.	58	Director
Chaim Davis	36	Director
Johan (Thijs) Spoor	41	Director
Fred Knoll	58	Director

Biographical Information

Thomas W. Gardner has served as our Chairman, Chief Executive Officer and President since May 2010, and as the Chief Executive Officer, the President and a director of AtheroNova Operations since its formation in December 2009. He held the same positions with Z&Z Nevada, the predecessor in interest to AtheroNova Operations, from December 2006 until its merger into AtheroNova Operations in March 2010. Since September 2008, he also has been the President of PhyGen LLC, which designs, manufactures and sells instruments and implants for spine surgery. He is a senior medical industry executive with twenty-six years' experience in healthcare. He has extensive hands-on experience with successful start-up ventures, having helped found six healthcare companies, three of them that were publicly traded. He has served as President/CEO of Urogen, a San Diego-based Biotech company, President of Endocare, an Orange County-based urologic products company; President/CEO of AutoCath, an Orange County based

vascular access company, and Executive Vice President of Medstone International, an Orange County medical products company. Mr. Gardner's twenty-six years of experience in the healthcare industry and his substantial experience with successful start-up ventures and public companies enables him to offer valuable perspectives on the operation of our business.

Mark Selawski has served as our Chief Financial Officer and Secretary since May 2010. Mr. Selawski joined AtheroNova Operations and Z&Z Nevada in January 2010 as Chief Financial Officer. He became the Secretary of AtheroNova Operations in March 2010. From 2004 to 2009 he served as Chief Financial Officer of United Polychem, Inc., a privately held petrochemical distribution company. From 1988 to 2004, he held several positions at Medstone International, during the last 9 years being the Vice President-Finance, Chief Financial Officer and Corporate Secretary. Medstone was a NASDAQ-listed capital medical device manufacturer dedicated to urology products. Before joining Medstone, he held various financial positions with a number of manufacturing and high-tech companies in Southern California. He holds a Bachelor of Science in Accounting from Bowling Green State University.

Gary Freeman Mr. Freeman has served as one of our directors since July 2007 and currently serves as the Chairman of the Audit Committee of our board of directors. Mr. Freeman is currently a Partner in Beach, Freeman, Lim & Cleland's Audit and Accounting services division. In conjunction with various consulting engagements, Mr. Freeman has assumed interim senior level management roles at numerous public and private companies during his career, including Co-President and Chief Financial Officer of Trestle Holdings, Inc., Chief Financial Officer of Silvergraph International and Chief Financial Officer of Galorath Incorporated. Mr. Freeman served as a member of the board of directors of Blue Holdings, Inc. Trestle Holdings, Inc. and GVI Security Solutions. Mr. Freeman's previous experience includes ten years with BDO Seidman, LLP, including two years as an Audit Partner. Mr. Freeman brings to our board his extensive experience in accounting and financial matters for public companies.

Boris Ratiner, M.D. has served as one of our director since May 2010 and currently serves as the Chairman of the Medical Committee of our board of directors. Dr. Ratiner has been a director of AtheroNova Operations since December 2009 and was a director of Z&Z Nevada from December 2006 until March 2010. He received an Advanced Bachelor's degree in Chemistry at Occidental College in Los Angeles. He then attended Medical School at LSU in New Orleans, followed by an Internal Medicine Residency and Rheumatology Fellowship at the University of California San Francisco (UCSF). He is Board Certified in Internal Medicine and Rheumatology and is in private practice in Tarzana, California. He is the medical director and founder of Rheumatology Therapeutics, where he leads a team of 23 staff members that care for patients with Arthritis and Autoimmune Diseases. He also serves on the board of the San Fernando Valley Branch of the Arthritis Foundation and is the Program Director for the Southern California Rheumatism Society. He is a founder and active board member of 4Medica, a successful medical informatics company that he co-founded in 1999. He is also a Clinical Instructor of Medicine at the David Geffen School of Medicine at the University of California Los Angeles (UCLA), a teaching attendant with the Cedars-Sinai's Division of Rheumatology and an instructor at the Northridge Family Medicine Teaching Program. He is an active clinical investigator and is actively involved in trials of new medications for gout, lupus, rheumatoid arthritis, osteoarthritis, psoriatic arthritis, ankylosing spondylitis and fibromyalgia. He is published in peer-reviewed papers, abstracts and textbooks. He is a frequent speaker at local hospitals to physicians on Rheumatology related diseases. He has authored several book chapters on osteoarthritis and research papers on Hepatitis C arthritis. Dr. Ratiner's extensive experience in various aspects of medical practice and research provides valuable insights with respect to our research and development activities.

Paul DiPerna has served as a member of our board of directors since November 2010 and currently serves as the Chairman of the Compensation Committee of our board of directors. Mr. DiPerna is the Founder, Chief Technical Officer and a Board Member of Tandem Diabetes Care, a venture backed company that has raised $78 million. Tandem is developing technology to be used in the care of diabetes. In this venture Mr. DiPerna has over 18 patents issued and in process. Prior to forming Tandem, Mr. DiPerna worked at Baxter Healthcare for 14 years where he held progressive management positions as a Technologist for cell separation systems, Program Manager of the largest and most complex system Baxter had undertaken, Director of Business Develop in the corporate technology group creating new technologies and integrating acquisitions into Baxter and as the General Manager of Digital Dental Sciences, a CT-based startup within the organization. Mr. DiPerna had 10 patents issued at Baxter. Mr. DiPerna was also a Senior VP of Technology and Operations at Hepahope, a startup developing liver dialysis systems for end stage liver failure patients prior to funding of Tandem. Mr. DiPerna received a Masters in Engineering Management from Northeastern University and a BS in Mechanical Engineering from the University of Massachusetts Lowell. He is a member of the American Diabetes Association and the American Society of Clinical Oncology. Mr. DiPerna brings to our board of directors his extensive management experience in the healthcare industry.

Alexander Polinsky, Ph.D. has served as a member of our board of directors since October 2010. Dr. Polinsky received his Ph.D. in Physical Chemistry from Moscow University, Russia, in 1982, followed by post-doctoral training at the Institute for Biochemistry at the Russian Academy of Science. He was on the faculty at Moscow University for 5 years studying the mechanisms of action of synthetic vaccines. After moving to the U.S. in 1988, he spent 2.5 years as a Visiting Scientist at UCSD developing new methods for computer-aided drug design. In 1991, Dr. Polinsky co-founded the Alanex Corporation and built the company from scratch around novel computational and combinatorial chemistry technologies; he served as Alanex's Chief Scientific Officer until it was acquired by Agouron in 1997. After the acquisition by Pfizer in 2000, Dr. Polinsky became Vice President, Head of Discovery Technologies, at the Pfizer La Jolla Labs. In 2001 he established Pfizer's global chemistry outsourcing network and

between 2001 and 2006, managed a $750 million investment in the creation of modern drug screening collection. In 2006, he moved into Pfizer Global Research Technology where he led the development of Pfizer External Research Network and Pharma Incubator concepts. In 2007, Dr. Polinsky established The Pfizer Incubator (TPI) and became its CEO, starting three biotechnology companies. He left Pfizer in 2008 to pursue his own entrepreneurial interests and in 2009 started a biotech company Tartis, Inc. developing oncology drugs, and joined Maxwell Biotech Venture Fund as its Managing Partner. Over the years, Dr. Polinsky invested and served on boards of several private biotech startups. Dr. Polinsky brings to our board of directors his extensive experience in the pharmaceutical industry.

Chaim Davis has served as one of our directors since May 2010. He is currently the Managing Partner of Revach Fund L.P., an investment fund focused on life science industries. He served as a Healthcare Analyst at The Garnet Group from April 2001 through June 2004. He received his bachelor's degree from Columbia University. Mr. Davis' experience in various aspects of life science and healthcare industry investments provides valuable insights with respect to capitalizing our operations.

Johan (Thijs) Spoor was appointed as a member of our board of directors on January 3, 2012. Mr. Spoor currently serves as the Chief Executive Officer and President, and is a director, of FluoroPharma Medical, Inc. He previously held the title of Chief Financial Officer for Sunstone BioSciences. Prior to joining Sunstone BioSciences, he worked as a consultant at Oliver Wyman focusing on helping pharmaceutical and medical device companies evaluate their global revenue potential given the complex interplay of regulatory approvals, the reimbursement environment, as well as the impact of physician preference within constantly evolving standards of care. He further specialized on the implications of healthcare reform on new product approval and health insurance reform. Mr. Spoor has also been an equity research analyst at J.P. Morgan and Credit Suisse covering the Biotechnology and Medical Device industries. He worked in the pharmaceutical industry spending 10 years with Amersham / GE Healthcare where he worked in seven countries in a variety of roles including setting up GMP facilities meeting ISO 9001 standards, accountability for the entire nuclear cardiology portfolio and most recently as the Director of New Product Opportunities leading the PET strategic plan. Mr. Spoor holds a Nuclear Pharmacy degree from the University of Toronto as well as an M.B.A. from Columbia University with concentrations in finance and accounting. He has been a guest lecturer at Columbia Business School, Kings College in London and the University of Newcastle in Australia and has presented at medical grand rounds and psychiatric grand rounds at various hospitals on the role of brain imaging. Mr. Spoor also serves as a member of the board of directors of MetaStat, Inc. (MTST). Mr. Spoor's experience managing a publicly traded company and his experience in the pharmaceutical and medical device industries provides valuable insights with respect to our operational activities.

Fred Knoll was appointed as a member of our board of directors on November 6, 2012. Since 1987, Mr. Knoll has been the principal and portfolio manager at Knoll Capital Management, an investment company managing funds over the last two decades in areas such as emerging growth companies, restructurings and China. During the 80's and early 90's, he was Chairman of the Board of Directors of Telos Corporation, a computer systems integration company, served as investment manager for General American Investors, was the United States representative on investments in leveraged buyouts and venture capital for Murray Johnstone, Ltd. of Glasgow, UK, and headed the New York investment group of Robert Fleming, Inc., at the time, a leading United Kingdom merchant bank subsequently acquired by JP Morgan, managing a venture capital fund and the U.S. research team. Mr. Knoll started his investment career as an investment analyst at Capital Research (Capital Group) in the early 80s and held positions in sales and marketing with Wang Inc. and Data General and software engineering with Computer Sciences Corporation in the late 70s. Mr. Knoll holds a Bachelor's of Science in Electrical Engineering and Computer Science from Massachusetts Institute of Technology (M.I.T.), a Bachelor's of Science in Management from the Sloan School at M.I.T., and a M.B.A. from Columbia University in Finance and was a member of the Columbia University International Fellows Program. Mr. Knoll's experience as an investor provides valuable insights with respect to capitalizing our operations.

On May 13, 2010, Filiberto Zadini, Giorgio Zadini, Thomas W. Gardner, Boris Ratiner, W-Net, Europa and MKM entered into a Voting Agreement pursuant to which such parties became obligated, for four years, to vote to elect members of our board of directors as described below. The Voting Agreement, which was amended on November 6, 2012, provides that the authorized number of directors will be eight, consisting of three directors whose replacements will be determined under the terms of the Voting Agreement by the holders of a majority of the shares held by the Z&Z Shareholders (consisting of Giorgio Zadini, Boris Ratiner and Thomas W. Gardner), currently Thomas W. Gardner, Boris Ratiner, M.D. and Paul DiPerna, three directors whose replacements will be determined under the Voting Agreement by the holders of a majority of the shares held by the Purchasers, currently Gary Freeman, Chaim Davis and Fred Knoll, and two additional directors whose replacements will be determined jointly by the holders of a majority of the shares held by the Z&Z Shareholders and the holders of a majority of the shares held by the Purchasers, currently Alexander Polinsky, Ph.D. and Johan (Thijs) Spoor.

Section 16(a) Beneficial Ownership Reporting Compliance.

Section 16(a) of the Securities Exchange Act of 1934 requires that our executive officers and directors, and persons who own more than ten percent of a registered class of our equity securities, file reports of ownership and changes in ownership with the SEC. Executive officers, directors and greater-than-ten percent stockholders are required by SEC regulations to furnish us with all Section 16(a) forms they file. Based solely on our review of the copies of the forms received by us and written representations from certain reporting persons that they have complied with the relevant filing requirements, we believe that, during the year ended December 31, 2013, all of our executive officers, directors and greater-than-ten percent stockholders complied with all Section 16(a) filing requirements.

Code of Ethics

We have adopted a Code of Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A copy of our Code of Ethics may be obtained free of charge by contacting us at:

AtheroNova Inc.

2301 Dupont Drive, Suite 525

Irvine, CA 92612

Attention: Secretary

(949) 476-1100

Audit Committee

Our Audit Committee currently consists of Messrs. Freeman (who serves as Chairman), Davis and Spoor. Our Audit Committee is responsible for selecting and engaging our independent accountant, establishing procedures for the confidential, anonymous submission by our employees of, and receipt, retention and treatment of concerns regarding accounting, internal controls and auditing matters, reviewing the scope of the audit to be conducted by our independent public accountants, and periodically meeting with our independent public accountants and our chief financial officer to review matters relating to our financial statements, our accounting principles and our system of internal accounting controls. Our Audit Committee reports its recommendations as to the approval of our financial statements to our board of directors. The role and responsibilities of our Audit Committee are more fully set forth in an amended and restated written charter adopted by our board of directors on June 17, 2010. Our Audit Committee reviews and reassesses the Audit Committee Charter annually and recommends any changes to our board of directors for approval. We are not a "listed company" under SEC rules and are therefore not required to have an audit committee comprised of independent directors. We have, however, determined that Messrs. Freeman, Davis, DiPerna and Polinsky are "independent" as that term is defined in as that term is defined in the applicable rules for companies traded on the NASDAQ Stock Market, and that Mr. Freeman is an audit committee financial expert, as defined in Item 407(d)(5) of Regulation S-K. Our board of directors has also determined that each other member of our Audit Committee is able to read and understand fundamental financial statements and has substantial business experience that results in such member's financial sophistication. Accordingly, our board of directors believes that each member of our Audit Committee has sufficient knowledge and experience necessary to fulfill such member's duties and obligations on our Audit Committee.

ITEM 11. EXECUTIVE COMPENSATION.

Summary Compensation Table

The following table and related footnotes show the compensation paid during the fiscal years ended December 31, 2012 and 2011, to our named executive officers:

Name and Principal Position	Year	Salary ($)	Accrued Bonus ($)(3)	Option Awards ($)	All Compensation ($)	Total ($)
Thomas W. Gardner (1)	2013	$--	$--	--	$ 160,000	$160,000
Chairman, Chief Executive Officer and President	2012	$--	$48,000	--	$ 146,667	194,667
Mark Selawski (2)	2012	168,000	$--	--	--	168,000
Chief Financial Officer and Secretary	2011	178,000	$50,400	--	--	228,400

(1) Mr. Gardner serves as our Chairman, Chief Executive Officer and President under a Management Consulting Agreement dated August 30, 2010, the terms of which are described below, and has served in these capacities since May 2010.

(2) Mr. Selawski serves as our Chief Financial Officer and Secretary under an Employment Agreement dated August 30, 2010, as amended effective August 29, 2012, the terms of which are described below, and has served in these capacities since May 2010.

(3) Messrs. Gardner and Selawski accrued cash bonuses equal to 30% of their then current salary during 2012 upon successful financing transactions of at least $3,500,000 during the terms of their employment agreements. The bonuses were paid in 2013 upon completion of our annual audit for the 2012 fiscal year.

Employment Contracts

On August 30, 2010, we entered into a Management Consulting Agreement (the "Management Agreement") with Thomas W. Gardner, our Chairman, Chief Executive Officer and President. Under the terms of the Management Agreement, which has a term of three years unless earlier terminated as specified therein, we engaged Mr. Gardner to provide consulting and management services to us relating to the functions of chief executive officer, and agreed that he will have the full range of executive duties and responsibilities that are customary for public company chief executive officers, reporting to our board of directors. Mr. Gardner has been engaged through December 31, 2010 on a non-exclusive basis. Effective after January 1, 2011, our board of directors has the option, with 90 days written notice, to employ Mr. Gardner on a full-time basis as our chief executive officer. If Mr. Gardner declines such employment we may terminate the Management Agreement with 30 days written notice. We have not, as yet, exercised our option to employ Mr. Gardner on a full-time basis.

Under the Management Agreement, Mr. Gardner received an annual fee at an initial rate of $144,000, which then increased to $160,000 as of August 30, 2011. In the event Mr. Gardner is employed on a full-time basis, Mr. Gardner's annual compensation will increase to $190,000 on the first anniversary of his employment date and to $240,000 on the second anniversary of his employment date. Notwithstanding the foregoing, in the event that we consummate a capital raise transaction of at least $3,500,000 (a "Funding"), Mr. Gardner's annual compensation will increase to $190,000 if such Funding is consummated before August 30, 2012, and $240,000 if such Funding is consummated on or after August 30, 2012. Mr. Gardner is also entitled to receive an annual bonus equal to 30% of his then applicable annual compensation if we successfully complete a Funding and we realize certain operating benchmarks to be determined by our Compensation Committee in the respective fiscal year. In addition, Mr. Gardner was entitled to reimbursement of his reasonable legal fees (up to $10,000) incurred in connection with negotiating the Management Agreement. Payments under the Management Agreement will be grossed up to cover any taxes, interest and/or penalties incurred as a result of any payment under the Management Agreement being subject to the excise tax imposed by Section 4999 of the Internal Revenue Code of 1986, as amended.

The Management Agreement will terminate upon 30 days written notice by us if Mr. Gardner declines full time employment after we exercise our option to employ Mr. Gardner on a full-time basis, Mr. Gardner's death or Disability (as defined in the Management Agreement), our termination of the Management Agreement for Cause (as defined in the Management Agreement) or without Cause, or Mr. Gardner's termination of the Management Agreement for Good Reason (as defined in the Management Agreement) or without Good Reason. Upon the termination of the Management Agreement for any reason we have agreed to pay Mr. Gardner his then current annual base compensation then earned, accrued vacation (if any) and unpaid reimbursements due to Mr. Gardner for expenses incurred by Mr. Gardner prior to the date of termination, subject to the applicable provisions of the Management Agreement. Upon the termination of the Management Agreement as a result of Mr. Gardner's death or as a result of our termination thereof without Cause or Mr. Gardner's termination thereof for Good Reason, we have also agreed to pay Mr. Gardner a prorated annual bonus (based on his then current annual base compensation), to the extent earned. In addition, upon our termination of the Management Agreement without cause or upon Mr. Gardner's termination of the Management Agreement for Good Reason, we have agreed to pay Mr. Gardner, subject the parties' entry into a general release, a lump sum payment of one year's then current annual base compensation as severance. The parties have agreed to resolve disputes under the Management Agreement through arbitration.

As an inducement material to Mr. Gardner's decision to enter into the Management Agreement our Compensation Committee granted to Mr. Gardner options under our 2010 Stock Incentive Plan (the "2010 Plan") to purchase 1,000,000 shares of our common stock ("Common Stock"). The options have a term of 7 years, a per share exercise price of $1.11 and vest 25% on the first anniversary of the date of grant and 6.25% on a quarterly basis thereafter until fully vested. This agreement expired on August 29, 2013.

On August 30, 2010, we also entered into an Employment Agreement (the "Employment Agreement") with Mark Selawski, our Chief Financial Officer and Secretary. The Employment Agreement replaced our existing employment agreement with Mr. Selawski. Under the terms of the Employment Agreement, which has a term of two years subject to earlier termination as specified therein, we employed Mr. Selawski as our chief financial officer reporting to our chief executive officer.

Mr. Selawski received an annual salary at an initial rate of $144,000 for the first year, with an increase to $168,000 on August 30, 2011. Notwithstanding the foregoing, in the event that we consummate a Funding Mr. Selawski's annual salary will increase to $210,000 if such Funding is consummated on or after August 30, 2011. Mr. Selawski is also entitled to receive an annual bonus equal to 30% of his then applicable annual salary if we successfully complete a Funding and we realize certain operating benchmarks to be determined by our Compensation Committee in the respective fiscal year. Mr. Selawski will receive an automobile allowance of $300 per month, or with his consent, we may lease a vehicle for Mr. Selawski's use in lieu of paying such automobile allowance, and will be entitled to three weeks annual paid vacation. Mr. Selawski is also entitled to reimbursement of his reasonable legal fees (up to $10,000) incurred in connection with negotiating the Employment Agreement. Payments under the Employment Agreement will be grossed up to cover any taxes, interest and/or penalties incurred as a result of any payment under the Employment Agreement being subject to the excise tax imposed by Section 4999 of the Internal Revenue Code of 1986, as amended.

The Employment Agreement will terminate upon Mr. Selawski's death or Disability (as defined in the Employment Agreement), our termination of the Employment Agreement for Cause (as defined in the Employment Agreement) or without Cause, or Mr. Selawski's termination of the Employment Agreement for Good Reason (as defined in the Employment Agreement) or without Good Reason. Upon the termination of the Employment Agreement for any reason we have agreed to pay Mr. Selawski his then current annual base salary then earned, accrued vacation and unpaid reimbursements due to Mr. Selawski for expenses incurred by Mr. Selawski prior to the date of termination, subject to the applicable provisions of the Employment Agreement. Upon the termination of the Employment Agreement as a result of Mr. Selawski's Disability or as a result of our termination thereof without Cause or Mr. Selawski's termination thereof for Good Reason, we have agreed to offer COBRA coverage without administrative markup for a period of 18 months, or the maximum term permitted by then applicable law, if Mr. Selawski is not covered by any other comprehensive insurance that provides a comparable level of benefits to those provided under our then effective health plan. Upon the termination of the Employment Agreement as a result of Mr. Selawski's death we have agreed to pay Mr. Selawski a prorated annual bonus (based on his then current annual base salary) to the extent earned. In addition, upon our termination of the Employment Agreement without Cause or upon Mr. Selawski's termination of the Employment Agreement for Good Reason, we have agreed to pay Mr. Selawski, subject the parties' entry into a general release, a lump sum payment of one year's then current annual base salary as severance. The parties have agreed to resolve disputes under the Employment Agreement through arbitration.

As an inducement material to Mr. Selawski's decision to enter into the Employment Agreement our Compensation Committee granted to Mr. Selawski options under the 2010 Plan to purchase 250,000 shares of Common Stock. The options have a term of 7 years, a per share exercise price of $1.11 and vest 25% on the first anniversary of the date of grant and 6.25% on a quarterly basis thereafter until fully vested.

On November 29, 2012 the Compensation Committee approved the First Amendment to Mr. Selawski's Employment Agreement, effective as of August 29, 2012, in which the Term of the Employment Agreement was extended from two to three years in length and the lump sum payment due upon Termination without Cause was reduced to six months of his then current base salary. All other terms and conditions remained unchanged. The agreement expired on August 29, 2013.

Outstanding Equity Awards at Fiscal Year-End

The following table provides information regarding outstanding options held by our named executive officers as of the end of our fiscal year ended December 31, 2013.

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($) (1)	Option Expiration Date
Thomas W. Gardner (2)	812,500	187,500	1.11	08/30/17
Mark Selawski (3)	538,055	11,443	0.22	01/06/17
Mark Selawski (2)	203,125	46,875	1.11	08/30/17
Mark Selawski (4)	18,955	16,045	1.25	10/11/18

(1) Subject to certain conditions, the exercise price may be paid by delivery of already owned shares and the tax withholding obligations related to exercise may be paid by reduction of the underlying shares.

(2) The options granted vested 25% on the first anniversary of the grant date and 6.25% every three months thereafter until fully vested. The options are for a 7-year term, subject to earlier terminating in certain events related to termination of employment. The option exercises cease if there is a termination of employment and are forfeited entirely if termination is for cause. The Compensation Committee retains discretion, subject to the option plans' limits, to modify the terms of outstanding options.

(3) The option granted vested 25% on the first anniversary of the grant date and 2.0833% every month thereafter until fully vested. The options are for a 7-year term, subject to earlier terminating in certain events related to termination of employment. The option exercises cease if there is a termination of employment and are forfeited entirely if termination is for cause. The Compensation Committee retains discretion, subject to the option plans' limits, to modify the terms of outstanding options.

(4) The options granted vest 1/48th on the monthly anniversary date of the grant until fully vested. The options are for a 7-year term, subject to earlier terminating in certain events related to termination of employment. The option exercises cease if there is a termination of employment and are forfeited entirely if termination is for cause. The Compensation Committee retains discretion, subject to the option plans' limits, to modify the terms of outstanding options.

None of the executive officers listed in the above table exercised options during the fiscal year ended December 31, 2013.

Compensation of Directors

Independent directors are compensated at a base rate of $7,500 per year, paid in quarterly installments. Directors serving as chairman of a standing committee of our board of directors also receive an additional $5,000 per year, also paid in quarterly installments. Directors who are also employees or officers of our company do not receive any amounts over and above their compensation as an employee of our company. Each director has received cash compensation commensurate with their election to our board of directors. Each director also receives stock options upon his/her election to our board of directors and will receive annual option grants on the date of each successive stockholders' meeting in which they are elected to serve a successive term. Such grants for committee chairmen is an initial grant of an option to purchase 75,000 shares of common stock on the date of election and a grant of an option to purchase 37,000 shares of common stock at each successive annual stockholders meeting. Directors not serving as the chairman of a committee receive an option to purchase 50,000 shares of common stock on the date of election and an option to purchase 25,000 shares of common stock at each successive annual stockholders meeting. Vesting on all non-employee director stock options is 25% upon the date of grant and 25% on each anniversary of the date of grant until fully vested. The options expire seven years after the grant date of the option.

The following table presents information regarding compensation paid to our non-employee directors for our fiscal year ended December 31, 2013.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)	Total ($)
Gary Freeman (1)	12,500	13,530	26,030
Boris Ratiner (2)	12,500	82,200	94,700
Chaim Davis (3)	7,500	9,020	16,520
Alexander Polinsky (4)	7,500	9,020	16,520
Paul DiPerna (5)	12,500	13,530	26,030
Johan (Thijs) Spoor (6)	7,500	9,020	16,520
Fred Knoll (7)	7,500	--	7,500

(1) The aggregate number of common shares reserved under option awards outstanding at fiscal year-end totaled 150,000. The fair value of options granted to Mr. Freeman was estimated on the date of grant using the Black Scholes-Merton Model with the following weighted average assumptions:

Year	Risk Free Interest Rate	Volatility	Term (years)	Dividends
2013	1.38 %	113 %	6.25	--

(2) The aggregate number of common shares reserved under option awards outstanding at fiscal year-end totaled 350,000. The fair value of options granted to Mr. Ratiner was estimated on the date of grants using the Black Scholes-Merton Model with the following weighted average assumptions:

Year	Risk Free Interest Rate	Volatility	Term (years)	Dividends
2013	1.38% - 1.59 %	113% - 226%	6.25	--

(3) The aggregate number of common shares reserved under option awards outstanding at fiscal year-end totaled 137,500. The fair value of options granted to Mr. Davis was estimated on the date of grants using the Black Scholes-Merton Model with the following weighted average assumptions:

Year	Risk Free Interest Rate	Volatility	Term (years)	Dividends
2013	1.38 %	113 %	6.25	--

(4) The aggregate number of common shares reserved under option awards outstanding at fiscal year-end totaled 100,000. The fair value of options granted to Mr. Polinsky was estimated on the date of grants using the Black Scholes-Merton Model with the following weighted average assumptions:

Year	Risk Free Interest Rate	Volatility	Term (years)	Dividends
2013	1.38 %	113 %	6.25	--

(5) The aggregate number of common shares reserved under option awards outstanding at fiscal year-end totaled 112,500. The fair value of options granted to Mr. DiPerna was estimated on the date of grants using the Black Scholes-Merton Model with the following weighted average assumptions:

Year	Risk Free Interest Rate	Volatility	Term (years)	Dividends
2013	1.38 %	113 %	6.25	--

(6) The aggregate number of common shares reserved under option awards outstanding at fiscal year-end totaled 75,000. The fair value of options granted to Mr. Spoor was estimated on the date of grant using the Black Scholes-Merton Model with the following weighted average assumptions:

Year	Risk Free Interest Rate	Volatility	Term (years)	Dividends
2013	1.38 %	113 %	6.25	--

(7) The aggregate number of common shares reserved under option awards outstanding at fiscal year-end totaled 50,000.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The following table presents information regarding the beneficial ownership of our common stock by the following persons as of February 17, 2014: (i) each executive officer and director, (ii) all executive officers and directors as a group and (iii) each stockholder known to be the beneficial owner of more than 5% of our outstanding common stock (not taking into account contractual restrictions on beneficial ownership.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all shares beneficially owned, subject to community property laws where applicable. Shares of our common stock subject to options or warrants that are currently exercisable or exercisable within 60 days of February 17, 2014 are deemed to be outstanding and to be beneficially owned by the person holding the options for the purpose of computing the percentage ownership of that person but are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

The information presented in this table is based on 41,584,020 shares of our common stock outstanding on February 17, 2014. Unless otherwise indicated, the address of each of the executive officers and directors and 5% or more stockholders named below is c/o AtheroNova Inc., 2301 Dupont Drive, Suite 525, Irvine, CA 92612.

Name & Address of Beneficial Owner	**Shares**	**Percentage of Class Outstanding**
Executive Officers and Directors:		
Thomas W. Gardner(1)	4,337,437	10.2%
Mark Selawski (2)	851,038	2.0%
Boris Ratiner, MD (3)	3,321,951	7.7%
Chaim Davis(4)	323,958	*
Gary Freeman(5)	121,875	*
Alexander Polinsky, PhD(6)	81,250	*
Paul DiPerna(7)	93,956	*
Johan (Thijs) Spoor(8)	82,500	*
Fred Knoll(9)	8,624,621	18.0%
Directors and Executive Officers as a Group(10)	17,838,586	34.4%
5% Stockholders:		
Giorgio Zadini, MD 1515 Victoria Rd. S. Mendota Heights, MN 95118	4,411,247	10.6%
Europa International, Inc.(11) 5 East 44th St., 12th Floor New York, NY 10017	8,329,621	17.5%

ACT Capital Management, LLLP (12) 2 Radnor Corporate Center, Suite 111 Radnor, PA 19087	6,404,565	14.3%
Amir L Ecker (12) c/o ACT Capital Management, LLLP 2 Radnor Corporate Center, Suite 111 Radnor, PA 19087	6,404,565	14.3%
Carol G. Frankenfield (13) c/o ACT Capital Management, LLLP 2 Radnor Corporate Center, Suite111 Radnor, PA 19087	6,414,565	14.3%
OOO CardioNova 1 Bolshaya Yakimanka St Moscow, Russia	2,272,419	5.5%

*Less than 1%

(1) Includes 875,000 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options and 47,168 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding warrants.

(2) Includes 790,123 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options and 5,700 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding warrants.

(3) Includes 180,208 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options, 1,230,120 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding warrants and 217,391 shares issuable within 60 days of February 17, 2014 upon conversion of presently outstanding convertible notes. The aforementioned notes and certain of the aforementioned warrants prohibit the holder converting the notes or exercising such warrants if after such conversion and/or exercise the holder would beneficially own more than 4.99% of our common stock, until such time as the shares issuable under the notes and such warrants, along with shares of our common stock held by the holder, constitute 4.99% or less of our outstanding common stock, or the holder elects to remove such restriction.

(4) Includes 115,625 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options.

(5) Includes 121,875 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options.

(6) Includes 81,250 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options.

(7) Includes 87,500 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options.

(8) Includes 50,000 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options and 7,500 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding warrants.

(9) Consists of 2,200,844 shares held directly by Europa, 25,000 shares issuable to Mr. Knoll within 60 days of February 17, 2014 upon exercise of presently outstanding stock options, 1,348,440 shares issuable to Europa within 60 days of February 17, 2014 upon exercise of presently outstanding warrants, and 4,780,337 shares issuable to Europa within 60 days of February 17, 2014 upon conversion of principal only of presently outstanding convertible notes. The aforementioned notes and certain of the aforementioned warrants prohibit the holder converting the notes or exercising such warrants if after such conversion and/or exercise the holder would beneficially own more than 4.99% of our common stock, until such time as the shares issuable under the notes and such warrants, along with shares of our common stock held by the holder, constitute 4.99% or less of our outstanding common stock, or the holder elects to remove such restriction. Fred Knoll, the principal of Knoll Capital Management, L.P., the investment manager for Europa, exercises voting and dispositive power over the shares held by Europa, but disclaims any beneficial interest in the shares of our common stock owned by Europa except to the extent of his pecuniary interest therein.

(10) Includes 2,326,581 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding stock options, 2,638,928 shares issuable within 60 days of February 17, 2014 upon exercise of presently outstanding warrants and 4,997,728 shares issuable within 60 days of February 17, 2014 upon conversion of principal only of presently outstanding convertible notes.

(11) Consists of 2,200,844 shares held directly by Europa, 1,348,440 shares issuable to Europa within 60 days of February 17, 2014 upon exercise of presently outstanding warrants, and 4,780,337 shares issuable to Europa within 60 days of February 17, 2014 upon conversion of principal only of presently outstanding convertible notes. The aforementioned notes and certain of the aforementioned warrants prohibit the holder converting the notes or exercising such warrants if after such conversion and/or exercise the holder would beneficially own more than 4.99% of our common stock, until such time as the shares issuable under the notes and such warrants, along with shares of our common stock held by the holder, constitute 4.99% or less of our outstanding common stock, or the holder elects to remove such restriction.

(12) Consists of 100,000 shares held directly by ACT Capital Management, LLLP, 1,070,000 shares held directly by ACT Capital Partners, LP, 1,200,000 shares held directly by Amir L. Ecker, 150,000 shares held directly by Maria T. Ecker, 115,000 shares held directly by Amir L. Ecker and Maria T. Ecker Joint Tenants, 150,000 shares held directly by The Ecker Family Partnership, 300,000 shares held directly by Delaware Charter G&T cust FBO Amir L. Ecker IRA, 1,529,130 shares issuable within 60 days of February 17, 2014 upon the exercise of presently

outstanding warrants and 1,413,444 shares issuable within 60 days of February 17, 2014 upon conversion of principal only of presently outstanding convertible notes. The aforementioned notes and certain of the aforementioned warrants prohibit the holder converting the notes or exercising such warrants if after such conversion and/or exercise the holder would beneficially own more than 4.99% of our common stock, until such time as the shares issuable under the notes and such warrants, along with shares our our common stock held by the holder, constitute 4.99% or less of our outstanding common stock, or the holder elects to remove such restriction. ACT Capital Management, LLLP controls the shares held by the foregoing stockholder. Investment decisions made on behalf of ACT Capital Management, LLLP are made by its General Partners Amir L. Ecker and Carol G. Frankenfield. ACT Capital Management, LLLP, Amir L. Ecker and Carol G. Frankenfield may be deemed the beneficial owner of the shares held by the foregoing stockholders but disclaim beneficial ownership in such shares except to the extent of their pecuniary interest therein.

(13) Consists of 100,000 shares held directly by ACT Capital Management, LLLP, 1,070,000 shares held directly by ACT Capital Partners, LP, 1,200,000 shares held directly by Amir L. Ecker, 150,000 shares held directly by Maria T. Ecker, 115,000 shares held directly by Amir L. Ecker and Maria T. Ecker Joint Tenants, 150,000 shares held directly by The Ecker Family Partnership, 300,000 shares held directly by Delaware Charter G&T cust FBO Amir L. Ecker IRA, 10,000 shares held directly by Carol G. Frankenfield, 1,529,130 shares issuable within 60 days of February 17, 2014 upon the exercise of presently outstanding warrants and 1,413,444 shares issuable within 60 days of February 17, 2014 upon conversion of principal only of presently outstanding convertible notes. The aforementioned notes and certain of the aforementioned warrants prohibit the holder converting the notes or exercising such warrants if after such conversion and/or exercise the holder would beneficially own more than 4.99% of our common stock, until such time as the shares issuable under the notes and such warrants, along with shares of our common stock held by the holder, constitute 4.99% or less of our outstanding common stock, or the holder elects to remove such restriction. ACT Capital Management, LLLP controls the shares held by the foregoing stockholder. Investment decisions made on behalf of ACT Capital Management, LLLP are made by its General Partners Amir L. Ecker and Carol G. Frankenfield. ACT Capital Management, LLLP, Amir L. Ecker and Carol G. Frankenfield may be deemed the beneficial owner of the shares held by the foregoing stockholders but disclaim beneficial ownership in such shares except to the extent of their pecuniary interest therein.

Change in Control Arrangements

To our knowledge there are no arrangements which may result in a change in control of our company at a subsequent date.

Equity Compensation Plan Information

The following table sets forth information concerning our equity compensation plans as of December 31, 2013.

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 (1)	4,340,000	$ 0.97	3,062,964
Equity compensation plans not approved by security holders (2)	3,480,204	$ 0.28	--
Total	7,820,204	$ 0.67	3,062,964

(1) Consists of awards issued and issuable pursuant to the 2010 Plan.

(2) Consists of options and warrants assumed in our acquisition of AtheroNova Operations and options granted outside the 2010 Plan..

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

Transactions with Officers and Directors

Other than the transactions described below, since January 1, 2012, there has not been, nor is there currently proposed, any transaction or series of similar transactions to which we were or will be a party:

-

in which the amount involved exceeds the lesser of $120,000 or one percent of the average of our total assets at year end for the last two completed fiscal years; and

- in which any director, executive officer, stockholder who beneficially owns 5% or more of our common stock or any member of their immediate family had or will have a direct or indirect material interest.

On May 13, 2010, we issued to Europa a Note in the aggregate principal amount of $500,000, with a conversion price of approximately $0.39 which was subsequently amended to $0.29 on June 15, 2012, and certain common stock purchase warrants to purchase 636,266 shares of our common stock at a per share exercise price of approximately $0.39 per share. Fred Knoll is a director of our company and the principal of Knoll Capital Management, L.P., the investment manager for Europa.

On September 4, 2012 and October 1, 2012, we issued a 2.5% Senior Secured Convertible Note to Europa for gross proceeds of $416,666.66. The note was issued pursuant to the exercise of certain rights to cause our company to sell to Europa an aggregate of $500,000 in additional notes (substantially in the form of the Second Amended Notes). We issued a remaining note in an aggregate principal amount of $250,000 to Europa on October 31, 2012.In making the stock issuances described above without registration under the Securities Act of 1933, as amended (the “Securities Act”), we relied upon one or more of the exemptions from registration contained in and/or promulgated under Section 4(2) of the Securities Act as each of the stock recipients in the private placement transactions was an accredited investor and no general solicitation or advertising was used in connection with such stock issuances.

Accounts payable includes $50,841 and $17,533 as December 31, 2013 and 2012, respectively, that are payable to our officers and directors.

Director Independence

In conjunction with the preparation of this report, using the definition of "independence" established by the NASDAQ Stock Market, we have evaluated all relationships between each director and our company. Based on the foregoing definition, we have determined that five of our directors, Messrs. Freeman, Davis, Polinsky, DiPerna and Spoor, currently meet the definition of an "independent" director as defined in the applicable rules for companies traded on the NASDAQ Stock Market. Each of Messrs Freeman, Davis, Polinsky, DiPerna and Spoor serves on the Audit Committee and/or Compensation Committee of our board of directors. We do not have a separately designated nominating committee of our board of directors. Our Board of Directors will continually monitor the standards established for director independence under applicable law or listing requirements and will take all reasonable steps to assure compliance with those standards.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

On October 25, 2010, we retained Weinberg & Co. P.A. ("Weinberg") to serve as our principal independent accountant. All audit work was performed by the full time employees of Weinberg. Our Audit Committee approves in advance, all services performed by Weinberg. Our board of directors has considered whether the provision of non-audit services is compatible with maintaining the principal accountant's independence, and has approved such services.

Audit Fees

The aggregate fees billed by Weinberg for professional services rendered for the audit of our annual financial statements and review of financial statements included in our quarterly reports and services that are normally provided in connection with statutory and regulatory filings were $69,014 for the fiscal year ended December 31, 2013.

Audit-Related Fees

None.

Tax Fees

During fiscal year 2013, we recorded accounting/professional fees totaling $6,875 that were billed to us by Weinberg for the preparation of our 2012 annual tax returns.

All Other Fees

None.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

The financial statements filed as part of this Annual Report on Form 10-K are listed on page 26.

The exhibits filed with this Annual Report on Form 10-K are listed in the attached Exhibit Index.

SIGNATURES

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

ATHERONOVA INC.

(Registrant)

Date: February 27, 2014 By: /s/Thomas W. Gardner
Thomas W. Gardner
Chairman, Chief Executive Officer & Presiden
(Principal Executive Officer)

POWER OF ATTORNEY

The undersigned directors and officers of AtheroNova Inc. do hereby constitute and appoint Thomas W. Gardner and Mark Selawski, and each of them, with full power of substitution and resubstitution, as their true and lawful attorneys and agents, to do any and all acts and things in our name and behalf in our capacities as directors and officers and to execute any and all instruments for us and in our names in the capacities indicated below, which said attorney and agent, may deem necessary or advisable to enable said corporation to comply with the Securities Exchange Act of 1934, as amended and any rules, regulations and requirements of the Securities and Exchange Commission, in connection with this Annual Report on Form 10-K, including specifically but without limitation, power and authority to sign for us or any of us in our names in the capacities indicated below, any and all amendments (including post-effective amendments) hereto, and we do hereby ratify and confirm all that said attorneys and agents, or either of them, shall do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1933, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/Thomas W. Gardner	Chairman, Chief Executive Officer and President	February 27, 2014

Thomas W. Gardner	(Principal Executive Officer)	
/s/Mark Selawski	Chief Financial Officer and Secretary	
Mark Selawski	(Principal Financial and Accounting Officer)	February 27, 2014
/s/Chaim Davis		
Chaim Davis	Director	February 27, 2014
/s/Gary Freeman		
Gary Freeman	Director	February 27, 2014
/s/Boris Ratiner, M.D.		
Boris Ratiner, M.D.	Director	February 27, 2014
/s/Alexander Polinsky		
Alexander Polinsky	Director	February 27, 2014
/s/Paul DiPerna		
Paul DiPerna	Director	February 27, 2014
/s/Johan Spoor		
Johan (Thijs) Spoor	Director	February 27, 2014
/s/Fred Knoll		
Fred Knoll	Director	February 27, 2014

Exhibit Index

Exhibit Number	Description of Exhibit
2.1	Merger Agreement by and between Trist Holdings, Inc., Z&Z Merger Corporation and Z&Z Medical Holdings, Inc., dated March 26, 2010. Incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on April 1, 2010.
3.1	Amended and Restated Certificate of Incorporation. Incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on June 25, 2010.
3.2	Amended and Restated Bylaws. Incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on June 23, 2010.
4.1	Amended and Restated Certificate of Incorporation. Incorporated by reference to Exhibit 3.1.
4.2	Amended and Restated Bylaws. Incorporated by reference to Exhibit 3.2.
4.3	2010 Stock Incentive Plan. Incorporated by reference to Exhibit B to the Definitive Information Statement on Schedule 14C (File No. 000-52315) filed with the Securities and Exchange Commission on June 3, 2010. **
4.4	Amendment No.1 to 2010 Stock Incentive Plan. Incorporated by reference to Appendix A to the Definitive Proxy Statement on Schedule 14A (File No. 000-52315) filed with the Securities and Exchange Commission on May 9, 2013. †
10.1	Securities Purchase Agreement dated May 13, 2010, among AtheroNova Inc., W-Net Fund I, L.P., Europa International, Inc. and MKM Opportunity Master Fund, Ltd. Incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 20, 2010.
10.2	Security Agreement dated May 13, 2010, among AtheroNova Inc., W-Net Fund I, L.P., Europa International, Inc. and MKM Opportunity Master Fund, Ltd. Incorporated by reference to Exhibit 10.5 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 20, 2010.
10.3	IP Security Agreement dated May 13, 2010, among AtheroNova Inc., W-Net Fund I, L.P., Europa International, Inc. and MKM Opportunity Master Fund, Ltd. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 20, 2010.
10.4	Form of Promissory Note. Incorporated by reference to Exhibit 10.7 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 20, 2010.
10.5	Form of Warrant. Incorporated by reference to Exhibit 10.8 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 20, 2010.
10.6	Management Consulting Agreement dated August 30, 2010, between AtheroNova Inc. and Thomas W. Gardner. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on September 3, 2010. †
10.7	Employment Agreement dated August 30, 2010, between AtheroNova Inc. and Mark Selawski. Incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on September 3, 2010. †

10.8	Stock Purchase Agreement dated November 3, 2011, between the Registrant and OOO CardioNova. Incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q (File No. 000-52315) filed with the Securities and Exchange Commission on November 10, 2011. *
10.9	License Agreement dated November 4, 2011, between the Registrant, AtheroNova Operations, Inc. and OOO CardioNova. Incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q (File No. 000-52315) filed with the Securities and Exchange Commission on November 10, 2011. *
10.10	Securities Purchase Agreement, dated as of May 14, 2012, by and among AtheroNova Inc., ACT Capital Partners, L.P., and Amir L. Ecker. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 25, 2012.
10.11	Form of 12% Senior Secured Convertible Note. Incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 25, 2012.
10.12	Form of Common Stock Purchase Warrant. Incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 25, 2012.
10.13	Subsidiary Guarantee, dated as of May 14, 2012, made by AtheroNova Operations, Inc. in favor of ACT Capital Partners, L.P. and Amir L. Ecker. Incorporated by reference to Exhibit 10.4 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on May 25, 2012.
10.14	Form of Amendment and Exchange Agreement dated June 15, 2012. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on June 20, 2012.
10.15	Form of Second Amended and Restated 2.5% Senior Secured Convertible Note. Incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on June 20, 2012.
10.16	Form of Amended and Restated Common Stock Purchase Warrant. Incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on June 20, 2012.
10.17	Office Lease dated June 15, 2012 between AtheroNova Inc. and TR Dupont Centre LLC. Incorporated by reference to Exhibit 10.4 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on June 20, 2012.
10.18	Form of Subscription Agreement. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on October 5, 2012.
10.19	Form of Common Stock Purchase Warrant. Incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on October 5, 2012.
10.20	First Amendment to Employment Agreement dated December 4, 2012 and effective August 29, 2012, between AtheroNova Inc. and Mark Selawski. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 000-52315) filed with the Securities and Exchange Commission on December 6, 2012.
10.21	Form of Subscription Agreement. Incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10Q (File No. 000-52315) filed with the Securities and Exchange Commission on November 12, 2013.
10.22	Form of Common Stock Purchase Warrant. Incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10Q (File No. 000-52315) filed with Securities and Exchange Commission on November 12, 2013.
21.1	

	Subsidiaries of the Registrant. Incorporated by reference to Exhibit 21.1 to the Registration Statement on Form S-1(File No. 333-167866) filed with the Securities and Exchange Commission on June 29, 2010.
23.1	Consent of Independent Registered Public Accounting Firm.
24.1	Power of Attorney. Incorporated by reference to the signature page to this Annual Report on Form 10-K.
31.1	Certification of Principal Executive Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as adopted pursuant to section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as adopted pursuant to section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002.
101.INS**	XBRL Instance.
101.SCH**	XBRL Taxonomy Extension Schema.
101.CAL**	XBRL Taxonomy Extension Calculation.
101.DEF**	XBRL Taxonomy Extension Definition.
101.LAB**	XBRL Taxonomy Extension Labels.
101.PRE**	XBRL Taxonomy Extension Presentation.

† Each a management contract or compensatory plan or arrangement required to be filed as an exhibit to this report on Form 10-K.

* Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

** XBRL information is furnished and not filed or a part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.