AtheroNova Inc.
Form 10-K
March 16, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K

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

For the fiscal year ended December 31, 2011

o 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 o No þ

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

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 þ No o

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 þ No o

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

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

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

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

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 $7,971,187.

As of March 9, 2012 there were 28,440,260 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" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The forward-looking statements are only predictions and provide our current expectations or forecasts of future events and financial 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 salts 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 salt technology and other possible indications of the use of bile salts 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.

We intend that all forward-looking statements be subject to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995. 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 salts 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 the rigorous regulatory approval processes, including pre-filing activities, required for approval of any drug or possible combination drug-device products that we may develop, whether independently, with strategic development partners or pursuant to collaboration arrangements;

- the risk that the FDA will not be satisfied with the results of our efforts to file an application for an Investigational New Drug ("IND") based on the data accumulated in our pre-clinical research;

- 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 securities, 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, 2011

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 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, Erectile Dysfunction, Kidney failure, Macular Degeneration and Hypertension. There is also some evidence that Cognitive Impairment is also a manifestation of reduced blood supply to the brain.

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 general 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 are developing the Active Pharmaceutical Ingredient ("API") needed to conduct toxicology studies and Phase 1 human clinical trials. Through an agreement completed in 2011, we have partnered with a research organization to conduct Phase 1 and 2 clinical trials in Russia. This partnership will help demonstrate the efficacy our API as demonstrated in our pre-clinical studies conducted in 2009, 2010 and 2011. Our API uses naturally occurring bile salts normally found in the digestive tract to dissolve, or delipidize, the portions of the soft, vulnerable plaque that are accessible through the fibrous cap. This delipization 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. The research conducted in pre-clinical studies demonstrated the ability of bile salts 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. At the conclusion of these studies, we determined that the results showed a superior regression model effective enough to take the next step in the development of the API by 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.

An important priority is to secure strategic and financial resources to potentially maximize the inherent value of our IP surrounding the use of bile salts in medical applications. The first step in this strategy was the successful consummation of the research agreement with OOO CardioNova ("CardioNova"), a wholly-owned subsidiary of the OOO Maxwell Biotech Group ("Maxwell"). This agreement is a critical first step in the development and potential 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 salts.

BUSINESS STRATEGY

Our goal is to develop a complete line of products based on our IP involving bile salts 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 our initial product to address the disease of atherosclerosis. This project is currently securing the API and creating an effective oral formulation to deliver this product at an optimal systemic

release point. The first batches of the API are in the small-volume formulation stage, with the delivery of material scheduled for early 2012. When delivered, we expect to have sufficient quantities on-hand for toxicology, Phase 1 and Phase 2 clinical trials. With the acceptance by the FDA of our Phase 1 protocol, enrollment and outcomes, we expect to enter Phase 1 during the middle of 2012 and, pending successful results of Phase 1, entry into Phase 2 by the end of 2012.

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 salts. 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 salt 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 salt 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, 2011 and 2010 and for the period from inception to December 31, 2011, our research and development expenses were $381,540, $386,385 and $873,075, 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") will become 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. Terms of the agreement specify that a Joint Steering Committee be established between both entities to determine final clinical protocols and research budget, which is expected to total approximately $3.8 million. Upon acceptance of the development plan, common stock equal to 10% of the research budget will be issued to CardioNova at a 20-day weighted average prior to signature of the initial term sheet, or $0.97 per share.

Additional common stock issuances of 20%, 40% and 30% of the approved budget shall be issued upon the approval of the Joint Steering Committee of the Phase 1 protocol, 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. As of December 31, 2011, neither the final development plan nor any other milestones calling for issuance of our common stock had been achieved, therefore no common stock has been issued.

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 will purchase up to 275,258 shares of our common stock for a cash purchase price of $0.97 per share. This transaction will take 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 will occur upon delivery of the final clinical product to be used in Phase 1 and 2 clinical trials.

We continue to seek other strategic alliances and collaborative arrangements for the development and/or commercialization of our bile salt 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 salt technology. We also are reviewing various financial alternatives that would provide infusions of capital and other resources needed to advance our bile salt 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 salt 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 salt technology. We also are reviewing various financial alternatives that would provide infusions of capital and other resources needed to advance our bile salt 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 salt 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 Salt-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 salts in regression of atherosclerotic plaque in various forms of administration, including transdermally, sublingually and intravenously. Such administrations bypass the normal physical sequestration of bile salts within the digestive tract. The function of bile salts 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 salts to the liver for re-processing or excretion in feces.

Between 2005 and 2008, 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 salts in the regression of atherosclerotic plaque via pharmacological preparation. Such filings have been received and acknowledged by the respective filing offices. As December 3, 2011, all 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 salts 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

Fast Track Designations

Designation as a “Fast Track” product means that the FDA has determined that the drug is intended for the treatment of a serious or life-threatening condition and demonstrates the potential to address unmet medical needs, and that the FDA will facilitate and expedite the development and review of the application for the approval of the product. The FDA generally will review a new drug application (“NDA”) for a drug granted Fast Track designation within six months.

We believe that the FDA will review any applications that we may submit for eligibility under the “Fast Track” designation due to the critical nature of atherosclerosis and its status as one of the leading causes of morbidity and mortality in the United States.

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 salts 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 salts (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 intend to use HDCA, one of its conjugates or derivatives, to validate the initial in vivo

study 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 salt 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 salt 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 March 9, 2012, we had 2 full-time employees and 2 contract 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 interests 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 latest private placement financing transaction raised about $1.9 million during 2011 and will allow us to continue to devote significant efforts to developing the necessary compounds and supplies to be used in additional testing of our formulations as well as continuing corporate obligations. We estimate the net funds from this private placement transaction will be sufficient to fund our planned activities through September of 2012.

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, 2011 and 2010 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 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.

Although we have pending patent applications in the United States and under the international Patent Cooperation Treaty covering uses of our technology, we have not received, and may never receive, any patent protection for our 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. There can also be no assurance that any 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.

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, 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.

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 evolving 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.

The issuance of the Notes in the Capital Raise Transaction has subjected us to possible remedies of a secured creditor and has limited our financing alternatives.

Our obligations under the Notes are debt obligations 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 the Notes and related agreements, the Note holders 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 the Notes, including covenants relating to incurring additional indebtedness without the Note holders' consent. These covenants, in the absence of waiver by the Note holders, limit our ability to fund our operations through additional debt financing. Additionally, financial penalties in the Notes and Warrants may make it

difficult to us to obtain funding from, or be acquired by, a third party.

Anti-dilution adjustments under the Notes and Warrants issued in the Capital Raise Transaction may dilute the interests of our stockholders.

If we are forced in the future to issue shares for prices less than the conversion price of the Notes or exercise price of the Warrants, that may trigger anti-dilution adjustments that increase the numbers of shares that are issuable on conversions of the Notes or exercises of the Warrants issued in the Capital Raise Transaction. Such adjustments, particularly possible “ratchet” adjustments not weighted by the relative magnitude of the particular low-price share issuance, may significantly dilute the holdings of stockholders other than the investors in the Capital Raise Transaction.

Our Chief Executive Officer does not devote his full-time efforts to us. His departure could be an event of default under the Notes.

While we believe that Thomas Gardner's services will be available to us, he currently has a non-exclusive contractual agreement to perform the services of CEO of PhyGen LLC, which designs, manufactures and sells instruments and implants for spine surgery. To assist with the ongoing operation of our company, we employ our Chief Financial Officer, Mark Selawski, on a full-time basis to assist in the day-to-day operations. Mr. Selawski has over 15 years' experience in the healthcare field and has had a previous working relationship with Mr. Gardner. To supplement this arrangement, we have secured office space adjacent to Mr. Gardner's current place of business in order to facilitate a proximal work environment for him and Mr. Selawski. 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 an employee 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 58.2% of our outstanding common stock, and approximately 56.9% 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 1,200 square feet of office space that we sublease on a month-to-month basis at an annual rent of $23,232. The sublease, entered into in May 2010, is from an unaffiliated spinal implant company which is currently managed by our CEO, Thomas W. Gardner. This sublease was based on market rates in effect in the Irvine area at the time of the commencement of the agreement. 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's electronic interdealer quotation QB system under the symbol "AHRO." As of March 9, 2012, the number of stockholders of record of shares of our common stock was 118. 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 information has been adjusted, where necessary, to reflect a 1-for-200 reverse stock split of our common stock which took effect on June 23, 2010. The following quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not represent actual transactions. As of March 9, 2012, there were 28,440,260 shares of our common stock issued and outstanding.

	High	Low
Year ended December 31, 2010		
First Quarter	$ 8.00	$ 4.00
Second Quarter	$ 70.00	$ 4.00
Third Quarter	$ 14.00	$ 1.03
Fourth Quarter	$ 2.75	$ 1.27
Year ended December 31, 2011		
First Quarter	$ 1.85	$ 0.57
Second Quarter	$ 1.16	$ 0.12
Third Quarter	$ 1.75	$ 0.45
Fourth Quarter	$ 1.50	$ 0.66

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 October 17, 2011, we issued 50,000 shares of our common stock to a service provider in consideration of services rendered to the Company.

From November 16 through December 7, 2011, we sold to five accredited investors, in private placement transactions, an aggregate of 481,819 units at $0.55 per unit, resulting in gross proceeds to us of $264,999.90. Each unit represents a share of our common stock and a warrant to purchase 0.30 shares of our common stock at an exercise price of $0.60 per share. The warrants are fully vested and exercisable for three years from the date of issuance.

On December 22, 2011, we sold 154,639 shares of our common stock to CardioNova for gross proceeds to us of $150,000.

In connection with the above stock sales, 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, 2011 and 2010. 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 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 called delipidization, such compounds dissolve 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

Operating expenses consist primarily of payroll and related 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, 2011 Compared to the year ended December 31, 2010

	Years ended December 31,		Increase
	2011	2010	(decrease)
Costs and expenses:			
Research and development:	381,540	386,385	(4,845)
Total research and development expenses	381,540	386,385	(4,845)
General and administrative:			
Share-based compensation	1,089,505	845,855	243,650
Other general and administrative expenses	1,089,190	874,327	214,863
Total general and administrative expenses	2,178,695	1,720,182	458,513
Impairment charge-intellectual property	--	572,868	(572,868)
Total impairment charge-intellectual property	--	572,868	(572,868)
Other (income) expense:			
Merger related expenses	--	323,294	(323,294)
Interest expense	658,175	349,908	308,267
Private placement costs	--	2,148,307	(2,148,307)
Change in fair value of derivative liabilities	(6,675,509)	10,155,575	(16,831,084)
Gain on extinguishment of derivative liability	(811,393)	--	(811,393)
Other (income)/expense	5,206	333	4,873
Total other (income) expense	(6,823,521)	12,977,417	(19,800,938)
Net (income) loss	$ (4,263,286)	$ 15,656,852	$ (19,920,138)

During the years ended December 31, 2011 and 2010, 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, 2011, research and development expenses decreased slightly to $381,540 from $386,385 in the same period in 2010. This is due to slightly lower intellectual property research costs and the payment of various benchmark contract payments in the current year compared to initial payments on the second pre-clinical trials in the 2010 calendar year.

General and administrative costs increased by $458,513, to $2,178,695, in 2011 compared to $1,720,182 for 2010 due to the costs associated with administrative costs for corporate offices and payroll expenses for a full calendar year in 2011 compared to the partial year operations following the reverse merger consummated on May 13, 2010. We also incurred consulting and profession fees to continue to expand our efforts in funding and regulatory administration. Finally, we incurred non-cash stock-based compensation expense of $1,089,505 for our officers, directors and consultants in 2011 compared to $845,855 for the same costs in 2010.

For the year ended December 31, 2011, there was no impairment charge-intellectual property expense compared to the $572,868 cost realized in 2010. This impairment charge was related to management’s prior year evaluation of the likelihood of the realization of certain long-lived assets, primarily intellectual property patents, as well as evaluation of the appropriateness of recording such costs as intangible assets, after which an impairment charge was recorded.

Merger related expenses decreased from $323,294 in the twelve months of 2010 with no comparable activity for the same period ended December 31, 2011 due to recognition in the prior year of the costs of completion of the reverse merger with Trist Holdings, Inc. These costs included the cost of purchasing the public shell company for $250,000

and costs incurred by the shell company relating to the Merger.

For the year ended December 31, 2011, interest expense was $658,175 compared to $349,908 for the year ended December 31, 2010. This increase is primarily due to interest expense and discount amortization incurred for a full calendar year on the 2.5% Senior Secured Convertible Notes in 2011 when compared to a partial year for 2010.

For the twelve months ended December 31, 2010, private placement costs were $2,148,307 compared to $0 for the comparable period of 2011. These costs related to the excess of the fair value of the derivative liability relating to the conversion feature of the Notes and Warrants issued in the Capital Raise Transaction (as described below) consummated in the prior year over the cash received in the transaction.

For the year ended December 31, 2011, change in fair value of derivative liabilities was income of $6,675,509 compared to expense of $10,155,575 for the same period in the prior year due to the recognition of periodic valuation adjustments of the convertible notes and warrants based on management determination of the fair value of those liabilities at December 31, 2011 and 2010, respectively.

For the year ended December 31, 2011, gain on extinguishment of derivative liability was $811,393 compared to $0 for the year ended December 31, 2010. This gain is due to the extinguishment of a portion of the derivative liability due to the partial conversion of the Convertible Notes in 2011, with no comparable transaction in the prior year.

Net income for the year ended December 31, 2011, was $4,263,286 compared to a net loss of $15,656,852 for the year ended December 31, 2010. The increase in income was due to the change in the fair value of derivative liabilities and the gain on extinguishment of derivative liability plus the 2010 costs associated with the merger and private placement. These gains were partially offset by increased general and administrative costs.

Liquidity and Capital Resources

From inception to December 31, 2011, we incurred a deficit during the development stage of $11,579,511 primarily as a result of our Note and Warrant issuances accounted for as a derivative liability and net operating losses, and 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, 2011, we had a net increase in cash and cash equivalents of $438,265. This increase resulted largely from net cash provided by financing activities of $1,880,131 partially offset by net cash used in operating activities of $1,440,829. Total liquid resources as of December 31, 2011 were $616,067 compared to $177,802 at December 31, 2010.

As of December 31, 2011, excluding our derivative liability of $6,211,021, we had working capital of $418,811 compared to working capital of $11,580 at December 31, 2010.

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, 2011, 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, 2011, management believes that we have sufficient capital to fund our operations through September of 2012. 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 2012. 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.

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

We have reported net income of $ 4,263,286 and a net loss of $15,656,852 for the years ended December 31, 2011 and 2010, respectively. The net loss attributable from date of inception, December 13, 2006 to December 31, 2011, amounts to $11,579,511. Management believes that we will continue to incur net losses through at least December 31, 2012.

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 Notes), the holder of each 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 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 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 Notes or such agreements, the 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.

Each Original Note was convertible at any time into common stock at a specified conversion price, which was approximately $0.39 per share, subject to adjustment. On July 6, 2011, we entered into an Amendment and Exchange Agreement with each of W-Net, Europa and MKM pursuant to which the Purchasers agreed to exchange the Original Notes for new 2.5% Senior Secured Convertible Notes (the "Notes"). The Notes have the same terms as the Original Notes (as described below), except that each Note is convertible at any time into common stock at a per share conversion price of $0.29, subject to adjustment.

The 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 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 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 Note conversion price and the Warrant exercise price are subject to specified adjustments for certain changes in the numbers of outstanding shares of our common stock, including conversions or exchanges of such. If additional

shares of our capital stock are issued, except in specified exempt issuances, for consideration which is less than the then existing Note conversion or Warrant exercise price, then such conversion or warrant exercise price will be reduced by anti-dilution adjustments. For the first $400,000 of such "Dilutive Issuances," the reduction will be made on a weighted average basis, taking into account the relative magnitudes of any Dilutive Issuance relative to the total number of outstanding shares. However, any further Dilutive Issuance would be subject to a more detrimental "full ratchet" adjustment that generally reduces the conversion or exercise price to equal the price in the Dilutive Issuance, regardless of the size of the Dilutive Issuance (see related accounting treatment for the Notes and Warrants below).

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

Under the Securities Purchase Agreement, as amended, if we meet three specified operating benchmarks during the first twenty-four months after the closing of the first Original Note purchase, an additional $1,500,000 in Note purchases (without Warrants) can be requested by us from the Purchasers. The determination of whether we have met the benchmarks is solely at the discretion of the Purchasers. If the benchmarks are determined to have been achieved, then we can require the Purchasers to make the additional $1,500,000 of Note purchases. If such benchmarks are not attained in the twenty-four month period, then the Purchasers, in their discretion, during the next two months may elect to purchase up to $1,500,000 of Notes (without Warrants) having an initial conversion price which is 25% higher than the conversion price in the Notes.

Each of the Notes and Warrants includes 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. The Company 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, the Company determined that as the conversion price of the Notes and the strike price of the Warrants may fluctuate based on the occurrence of future offerings or events, such prices were not fixed amounts. As a result, the Company determined that the conversion features of the Notes and the Warrants are not considered indexed to the Company's own stock and characterized the value of the Notes and the Warrants as derivative liabilities upon issuance.

The Company determined that the fair value of the conversion feature at issuance was $2,370,245, and that the fair value of the warrant liability at issuance was $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 will be amortized over the life of the Notes. As the aggregate fair value of these liabilities of $3,542,348 exceeded the aggregate value of the Notes of $1,500,000 at issuance, the excess of the liability over the aggregate value of the Notes of $2,042,348 was considered as a cost of the private placement in 2010. The Company has amortized $954,317 of the valuation discount of which, $627,958 was recorded during the period ended December 31, 2011. The remaining unamortized valuation discount of $559,696 as of December 31, 2011 has been offset against the face amount of the Notes for financial statement purposes. The fair value of the derivative liabilities as of December 31, 2011 was $6,211,021.

From issuance through December 31, 2011, the Purchasers exercised their option to convert a portion of the Original 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 in 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, the Company 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 these 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 statement of operations. The aggregate balance of the Notes outstanding as of December 31, 2011 amounted to $955,351.

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") will become 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. Terms of the agreement specify that a Joint Steering Committee be established between both entities to determine final clinical protocols and the research budget, which is expected to total approximately $3.8 million. Upon acceptance of the development plan, common stock equal to 10% of the research budget will be issued to CardioNova at a 20-day weighted average prior to signature of the initial term sheet, or $0.97 per share.

Additional common stock issuances of 20%, 40% and 30% of the approved budget shall be issued upon the approval of the Joint Steering Committee of the Phase 1 protocol, 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. As of December 31, 2011, neither the final development plan nor any other milestones calling for issuance of our common stock had been achieved, therefore no common stock has been issued.

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 will purchase up to 275,258 shares of our common stock for a cash purchase price of $0.97 per share. This transaction will take 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 will occur upon delivery of final clinical product to be used in Phase 1 and 2 clinical trials.

Research and Development Projects

We have a research agreement signed in 2010 with the cardiology research department of a major hospital institution in Southern California to carry out our second round of pre-clinical research. The agreement calls for payment of all research and clinical costs relating to the study of dosage and efficacy of bile salts on the atherosclerotic plaque in a non-human model. The total potential cost of the project is $312,583, to be paid in installments over the length of the study and associated manuscript based on the study data. To date, $175,000 has been paid on the achievement of benchmarks under the agreement.

Summary of Contractual Commitments

Employment Contracts

Employment contracts with 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.

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.

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 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 condensed 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 May 2011, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2011-4, which amends the Fair Value Measurements Topic of the Accounting Standards Codification (ASC) to help achieve common fair value measurement and disclosure requirements in U.S. GAAP and IFRS. ASU No. 2011-4 does not require additional fair value measurements and is not intended to establish valuation standards or affect valuation practices outside of financial reporting. The ASU is effective for interim and annual periods beginning after December 15, 2011. The Company will adopt the ASU as required. The ASU will affect the Company’s fair value disclosures, but will not affect the Company’s results of operations, financial condition or liquidity.

In June 2011, the FASB issued ASU No. 2011-5, which amends the Comprehensive Income Topic of the ASC. The ASU eliminates the option to present the components of other comprehensive income as part of the statement of changes in shareholders’ equity, and instead requires consecutive presentation of the statement of net income and other comprehensive income either in a continuous statement of comprehensive income or in two separate but consecutive statements. ASU No. 2011-5 is effective for interim and annual periods beginning after December 15, 2011. The Company will adopt the ASU as required. It will have no affect on the Company’s results of operations, financial condition or liquidity.

In September 2011, the FASB issued ASU 2011-08, “Testing Goodwill for Impairment”, an update to existing guidance on the assessment of goodwill impairment. This update simplifies the assessment of goodwill for impairment by allowing companies to consider qualitative factors to determine whether it is more likely or not that the fair value of a reporting unit is less than its carrying amount before performing the two step impairment review process. It also amends the examples of events or circumstances that would be considered in a goodwill impairment evaluation. The amendments are effective for annual and interim goodwill impairment tests performed for fiscal years beginning after December 15, 2011. Early adoption is permitted. The Company is currently evaluating the effects adoption of ASU 2011-08 may have on its goodwill impairment testing.

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, 2011 and 2010, 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, 2011 (cumulative). 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, 2011 and 2010, 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, 2011 (cumulative), 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
March 16, 2012

ATHERONOVA INC. AND SUBSIDIARY
(A Development Stage Company)
Consolidated Balance Sheets

	December 31, 2011	December 31, 2010
Assets		
Current Assets		
Cash	$616,067	$177,802
Other current assets	12,909	14,039
Total Current Assets	628,976	191,841
Equipment, net	4,000	5,521
Total Assets	$632,976	$197,362
Liabilities and Stockholders' Equity (Deficit)		
Current Liabilities:		
Accounts payable	$170,449	$157,665
Interest payable	39,716	22,596
Derivative liability	6,211,021	13,697,923
Total Current Liabilities	6,421,186	13,878,184
2.5% Senior secured convertible notes, net of discount	395,655	228,298
Commitments and contingencies	--	--
Stockholders' Equity (Deficit):		
Preferred stock, $0.0001 par value, 10,000,000 shares authorized, none outstanding at December 31, 2011 and December 31, 2010	--	--
Common stock, $0.0001 par value, 100,000,000 shares authorized, 28,390,260 and 23,420,899 outstanding at December 31, 2011 and December 31, 2010, respectively	2,828	2,337
Additional paid in capital	5,392,818	1,931,340
Deficit accumulated during the development stage	(11,579,511)	(15,842,797)
Total Stockholders' Equity (Deficit)	(6,183,865)	(13,909,120)
Total Liabilities and Stockholders' Equity (Deficit)	$632,976	$197,362

See accompanying notes to consolidated financial statements.

ATHERONOVA INC. AND SUBSIDIARY
(A Development Stage Company)
Consolidated Statements of Operations
For the years ended December 31, 2011 and 2010, and
For the period from December 13, 2006 (Inception) through December 31, 2011

	2011	2010	Cumulative From Inception
Revenue, net	$--	$--	$--
Operating expenses:			
Research and development	381,540	386,385	873,075
General and administrative expenses	2,178,695	1,720,182	4,081,362
Impairment charge-intellectual property	--	572,868	572,868
Loss from operations	(2,560,235)	(2,679,435)	(5,527,305)
Other (income) expenses:			
Other income	(434)	(1,426)	(3,550)
Cancellation of related-party debt	--	--	(100,000)
Merger-related expenses	--	323,294	323,294
Interest expense	658,175	349,908	1,008,083
Private Placement Costs	--	2,148,307	2,148,307
Gain on extinguishment of derivative liability	(811,393)	--	(811,393)
Change in fair value of derivative liabilities	(6,675,509)	10,155,575	3,480,066
Total other (income) expense	(6,829,161)	12,975,658	6,044,807
Net income (loss) before income taxes	4,268,926	(15,655,093)	(11,572,112)
Provision for income taxes	5,640	1,759	7,399
Net income (loss)	$4,263,286	$(15,656,852)	$(11,579,511)
Basic income (loss) per share	$0.17	$(0.70)	
Diluted income (loss) per share	$0.15	$(0.70)	
Basic weighted average shares outstanding	25,563,669	22,440,940	
Diluted weighted average shares outstanding	28,666,240	22,440,940	

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, 2011

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 of market price	--	--	309,417	--	309,417
Fair value of common stock and warrants issued to settle accounts payable	33,863	3	72,996	--	72,999
	50,000	5	72,495	--	72,500

Fair value of common stock issued for services					
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)

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, 2011 and 2010, and
For the period from December 13, 2006 (Inception) through December 31, 2011

	Years ended December 31,		Cumulative From Inception
	2011	2010	
Operating Activities:			
Net income/(loss)	$4,263,286	$(15,656,852)	$(11,579,511)
Adjustments to reconcile net income/(loss) to net cash used in operating activities:			
Loss on settlement of payables	54,377	--	54,377
Amortization of debt discount	613,957	326,347	940,304
Depreciation	2,558	1,548	4,106
Stock based compensation	1,035,131	945,855	2,030,986
Impairment charge-intellectual property	--	572,867	572,867
Cost of private placement	--	2,148,307	2,148,307
Gain on extinguishment of debt	(811,393)	--	(811,393)
Change in fair value of derivative liabilities	(6,675,509)	10,155,575	3,480,066
Cancellation of debt	--	--	(100,000)
Changes in operating assets and liabilities:			
Accounts payable & accrued expenses	75,624	(31,598)	355,885
Other current assets	1,130	(14,039)	(12,909)
Net cash used in operating activities	(1,440,839)	(1,551,990)	(2,916,915)
Investing Activities			
Purchase of equipment	(1,037)	(7,069)	(8,106)
Investment in intellectual property	--	--	(372,867)
Cash received from reverse merger	--	1,281	1,281
Net cash used in investing activities	(1,037)	(5,788)	(379,692)
Financing Activities			
Proceeds from issuance of common stock	1,880,141	312,527	2,517,668
Proceeds from sale of 2.5% senior secured convertible notes, net	--	1,395,006	1,395,006
Net cash provided by financing activities	1,880,141	1,707,533	3,912,674
Net change in cash	438,265	149,755	616,067
Cash - beginning balance	177,802	28,047	--
Cash - ending balance	$616,067	$177,802	$616,067
Supplemental disclosure of cash flow information:			
Income taxes	$5,640	$1,759	$7,399
Supplemental disclosure of non-cash investing and financing transactions:			
Stockholder notes issued in exchange for intellectual property	$--	$--	$200,000
Conversion of notes payable to related parties treated as a contribution to capital	$--	$200,000	$--
Conversion of convertible notes payable and accrued interest to equity	$473,707	$99,014	$572,721
Derivative liability created on issuance of convertible notes and warrants created	$--	$1,500,000	$1,500,000

Reclass of accounts payable to related party notes	$--	$--	$100,000
Common stock issued to settle accounts payable	$72,999	$--	$72,999

See accompanying notes to consolidated financial statements.

ATHERONOVA INC. and SUBSIDIARY
(a Development Stage Company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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 condensed 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. Common stock and the corresponding capital amounts of our company pre-merger have been retroactively restated as capital stock shares reflecting the exchange ratio in the merger and subsequent 1-for-200 reverse stock split affected on June 23, 2010. In conjunction with the Merger, we assumed liabilities and incurred costs of $323,294 which have been reflected as costs of the reverse merger in the

2010 statement of operations.

On June 23, 2010, we effectuated a reverse stock split of our outstanding common stock, with special treatment for certain of our stockholders to preserve round lot holders. The effect of the reverse stock split has been retroactively adjusted as of the earliest periods presented in these consolidated financial statements. We also decreased the number of authorized shares of common stock from 2,000,000,000 to 100,000,000, and authorized 10,000,000 shares of "blank check" preferred stock.

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 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 condensed 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 other liabilities, and valuation assumptions related to share based payments and derivative liability.

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. We have an accumulated deficit of $11,579,511 at December 31, 2011, have incurred recurring losses from operations since inception, and utilized cash flow from operating activities of $1,440,829 during the year ended December 31, 2011. 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.

Management expects that the current funds on hand will be sufficient to continue operations through September of 2012. Management is currently seeking additional funds and has had several interested parties enter into discussion with us regarding additional investment in our company via a private placement stock sale. These discussions are ongoing and there can be no assurances that they will result in a transaction. 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 condensed 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, 2011 and 2010, and for the period from inception to December 31, 2011, research and development costs incurred were $381,540, $386,385 and $873,075, respectively.

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 EPS is similar to basic EPS but presents the dilutive effect on a per share basis of potential common shares (e.g., warrants and options) as if they had been converted at the beginning of the periods presented, or issuance date, if later. 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.

Weighted average number of shares outstanding has been retroactively restated for the equivalent number of shares received by the accounting acquirer as a result of the reverse merger as if these shares had been outstanding as of the beginning of the earliest period presented. The 607,647 shares issued to the legal acquirer are in included in the weighted average share calculation from May 21, 2010, the date of the exchange agreement.

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.

A reconciliation of basic and diluted shares for the periods ended December 31, 2011 and 2010 follows:

	December 31, 2011	December 31, 2010
Average common shares outstanding-basic	25,563,669	22,440,940
Effect of dilutive securities-		
Warrants	2,830,745	--
Employee and director stock options	271,826	--
Average diluted shares	$ 28,666,240	$ 22,440,940

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

At December 31, 2011 and 2010, 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,	
	2011	2010
Convertible Notes	3,626,409	3,568,108
Warrants	--	5,304,857
Stock Options	--	2,199,498
Total	3,626,409	11,072,463

Stock-Based Compensation

We periodically issues 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.

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 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.

Revenue Recognition

As of December 31, 2011, we have not generated any revenues from the development of our IPs 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.

The following table presents certain investments and liabilities of our financial assets measured and recorded at fair value on our consolidated balance sheets on a recurring basis and their level within the fair value hierarchy as of December 31, 2010.

	Level 1	Level 2	Level 3	Total
Fair value of Derivative Liability at December 31, 2010	$--	$--	$13,697,923	$13,697,923
Fair value of Derivative Liability at December 31, 2011	$--	$--	$6,211,021	$6,211,021

At December 31, 2011 and December 31, 2010, the fair values of cash and cash equivalents, and accounts payable approximate their carrying values.

Recently Issued Accounting Standards

In May 2011, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2011-4, which amends the Fair Value Measurements Topic of the Accounting Standards Codification (ASC) to help achieve common fair value measurement and disclosure requirements in U.S. GAAP and IFRS. ASU No. 2011-4 does not require additional fair value measurements and is not intended to establish valuation standards or affect valuation practices outside of financial reporting. The ASU is effective for interim and annual periods beginning after December 15, 2011. The Company will adopt the ASU as required. The ASU will affect the Company's fair value disclosures, but will not affect the Company's results of operations, financial condition or liquidity.

In June 2011, the FASB issued ASU No. 2011-5, which amends the Comprehensive Income Topic of the ASC. The ASU eliminates the option to present the components of other comprehensive income as part of the statement of changes in shareholders' equity, and instead requires consecutive presentation of the statement of net income and other comprehensive income either in a continuous statement of comprehensive income or in two separate but consecutive statements. ASU No. 2011-5 is effective for interim and annual periods beginning after December 15, 2011. The Company will adopt the ASU as required. It will have no affect on the Company's results of operations, financial condition or liquidity.

In September 2011, the FASB issued ASU 2011-08, "Testing Goodwill for Impairment", an update to existing guidance on the assessment of goodwill impairment. This update simplifies the assessment of goodwill for impairment by allowing companies to consider qualitative factors to determine whether it is more likely or not that the fair value of a reporting unit is less than its carrying amount before performing the two step impairment review process. It also amends the examples of events or circumstances that would be considered in a goodwill impairment evaluation. The amendments are effective for annual and interim goodwill impairment tests performed for fiscal years beginning after December 15, 2011. Early adoption is permitted. The Company is currently evaluating the effects adoption of ASU 2011-08 may have on its goodwill impairment testing.

Other recent accounting pronouncements issued by the FASB (including its Emerging Issues Task Force), the AICPA, and the SEC 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, 2011 and December 31, 2010:

	December 31, 2011	December 31, 2010
Convertible Notes Payable	$ 955,351	$ 1,401,951
Less valuation Discount	(559,696)	(1,173,653)
Convertible Notes Payable, net	$ 395,655	$ 228,298

On May 13, 2010, we entered into a Securities Purchase Agreement with W-Net Fund I, L.P., Europa International, Inc. and MKM Opportunity Master Fund, Ltd., 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, 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. 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 Notes), the holder of each 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 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 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 Notes or such agreements, the 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.

Each Original Note was convertible at any time into common stock at a specified conversion price, which was approximately $0.39 per share, subject to adjustment. On July 6, 2011, the Company entered into an Amendment and Exchange Agreement with each W-Net, Europa and MKM pursuant to which the Purchasers agreed to exchange the Original Notes for the Notes. The Notes have the same terms as the Original Notes (as described below), except that each Note is convertible at any time into common stock at a per share conversion price of $0.29, subject to adjustment.

The 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 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 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 Note conversion price and the Warrant exercise price are subject to specified adjustments for certain changes in the numbers of outstanding shares of our common stock, including conversions or exchanges of such. If additional shares of our capital stock are issued, except in specified exempt issuances, for consideration which is less than the then existing Note conversion or Warrant exercise price, then such conversion or warrant exercise price will be reduced by anti-dilution adjustments. For the first $400,000 of such "Dilutive Issuances," the reduction will be made on a weighted average basis, taking into account the relative magnitudes of any Dilutive Issuance relative to the total number of outstanding shares. However, any further Dilutive Issuance would be subject to a more detrimental "full ratchet" adjustment that generally reduces the conversion or exercise price to equal the price in the Dilutive Issuance, regardless of the size of the Dilutive Issuance (see related accounting treatment for the Notes and Warrants below).

The 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 Note holders' consent. They will also limit and impose financial costs on our acquisition by any third party.

Under the Securities Purchase Agreement, as amended, if we meet three specified operating benchmarks during the first twenty-four months after the closing of the first Original Note purchase, an additional $1,500,000 in Note purchases (without Warrants) can be requested by us from the Purchasers. The determination of whether we have met the benchmarks is solely at the discretion of the Purchasers. If the benchmarks are determined to have been achieved, then we can require the Purchasers to make the additional $1,500,000 of Note purchases. If such benchmarks are not attained in the twenty-four month period, then the Purchasers, in their discretion, during the next two months may elect to purchase up to $1,500,000 of Notes (without Warrants) having an initial conversion price which is 25% higher than the conversion price in the Notes. As of December 31, 2011 the benchmarks have not been achieved by the Company.

Each of the Notes and Warrants includes 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. The Company 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, the Company determined that as the conversion price of the Notes and the strike price of the Warrants may fluctuate based on the occurrence of future offerings or events, such prices were not fixed amounts. As a result, the Company determined that the conversion features of the Notes and the Warrants are not considered indexed to the Company's own stock and characterized the value of the Notes and the Warrants as derivative liabilities upon issuance.

The Company determined that the fair value of the conversion feature at issuance was $2,370,245, and that the fair value of the warrant liability at issuance was $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 will be amortized over the life of the Notes. As the aggregate fair value of these liabilities of $3,542,348 exceeded the aggregate value of the Notes of $1,500,000 at issuance, the excess of the liability over the aggregate value of the Notes of $2,042,348 was considered as a cost of the private placement in 2010. The Company has amortized $940,316 of the valuation discount of which, $613,957 was recorded during the period ended December 31, 2011. The remaining unamortized valuation discount of $559,696 as of December 31, 2011 has been offset against the face amount of the Notes for financial statement purposes. The fair value of the derivative liabilities as of December 31, 2011 was $6,211,021 (see Note 4).

From issuance through December 31, 2011, the Purchasers exercised their option to convert a portion of the Original 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 in 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, the Company 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 these 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 accompanying statement of operations. The aggregate balance of the Notes outstanding as of December 31, 2011 amounted to 955,351.

4. 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 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 Notes and Warrants issued to W-Net, Europa and MKM in May 2010 contained such provisions and were recorded as derivative liabilities upon issuance. Derivative liabilities were valued using weighted-average Black-Scholes-Merton and Binominal valuation techniques with the following assumptions:

	December 31, 2011	December 31,2010
Conversion feature :		
Risk-free interest rate	0.25%	2.01%
Expected volatility	134%	150%
Expected life (in years)	2.37 years	3.37 years
Expected dividend yield	--	--
Warrants :		
Risk-free interest rate	0.25%	2.01%
Expected volatility	134%	150%
Expected weighted average life (in years)	2.37 years	3.37 years
Expected dividend yield	--	--
Fair Value :		
Conversion feature	$ 4,104,613	$ 9,177,865
Warrants	2,106,408	4,520,058
	$ 6,211,021	$ 13,697,923

We used an average of valuation methodologies to determine the value of our shares of common stock since upon the consummation of the Merger, the shares of our common stock were thinly traded on the OCTBB and therefore management believes the share price in the market did not reflect the true value of these shares. Management concluded that the share price as of May 13, 2010 was $0.23 per share which corresponded to the new share price sold in our private offering. As of December 31, 2011, we established that the trading value of our common stock on the OTCBB was sufficient to rely on the ending price at December 31, 2011 to re-measure the fair value. The risk-free interest rate was based on rates established by the Federal Reserve Bank, and we based the expected volatility assumption on a volatility index of peer companies as we did not have sufficient market information to estimate the volatility of our own stock and the expected life of the instruments as 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 future.

We measured the aggregate fair value of the conversion feature of the Notes and the Warrants issued on the date of issuance of May 13, 2010 as $3,542,348. The value of the derivative liability at the date of issuance of $3,542,348 in excess of the Notes with an aggregate face amount of $1,500,000 was $2,042,348, and such amount was recognized in the accompanying 2010 statements of operations as a cost of the private placement. As of December 31, 2011, we re-measured the remaining derivative liabilities and determined the aggregate fair value to be $6,211,021. We recorded the change in fair value of the derivative liabilities of $6,675,509 in the accompanying statement of operations for the year ending December 31, 2011.

The Company recorded a gain on the extinguishment of derivative liability of $811,393 due to the conversion of principal balance of convertible notes of $446,600 in the period ending December 31, 2011.

5. COMMITTMENTS

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") will become 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. Terms of the agreement specify that a Joint Steering Committee be established between both entities to determine final clinical protocols and research budget, which is expected to total approximately $3.8 million. Upon acceptance of the development plan, common stock equal to 10% of the research budget will be issued to CardioNova at a 20-day weighted average prior to signature of the initial term sheet, or $0.97 per share.

Additional common stock issuances of 20%, 40% and 30% of the approved budget shall be issued upon the approval of the Joint Steering Committee of the Phase 1 protocol, 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. As of December 31, 2011, the final development plan nor any other milestones calling for issuance of our common stock have been achieved, therefore no common stock has been issued.

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 will purchase up to 275,258 shares of our common stock for a cash purchase price of $0.97 per share. This transaction will take place in two installments. The first installment, which took place on December 22, 2011, was for issuance of 154,639 shares upon receipt of $150,000 as specified in the Licensing Agreement. The 2nd installment of 120,619 shares will occur upon delivery of final clinical product to be used in Phase 1 and 2 clinical trials.

Research and Development Projects

We have a research agreement signed in 2010 with the cardiology research department of a major hospital institution in Southern California to carry out our second round of pre-clinical research. The agreement calls for payment of all research and clinical costs relating to the study of dosage and efficacy of bile salts on the atherosclerotic plaque in a non-human model. The total potential cost of the project is $312,583, to be paid in installments over the length of the study and associated manuscript based on the study data. As of December 31, 2011 a total of $175,000 has been paid based upon the achievement benchmarks under the agreement.

6. STOCKHOLDERS' EQUITY

Common Stock

During the year ended December 31, 2011, we sold 3,145,695 units for $0.55 per unit, each unit consisting of one share of common stock and a warrant to purchase .30 shares of common stock for up to three years at $0.60 per share, to investors, resulting in proceeds to us of $1,730,141. In connection with such sales, warrants to purchase 913,703

shares of common stock were issued to these same purchasers. There were no commissions paid with respect to these sales.

Certain of these unit sales were made to existing employees, officers and vendors. Included in these totals was the sale of 324,407 units (representing 324,907 common shares and warrants to purchase an additional 97,323 common shares) to officers and vendors of the Company. We determined that it was appropriate to recognize compensation expense of $212,580 for the differential of the purchase price to the open market price of each respective purchase on its date of execution. Additionally, the associated warrants resulted in recognition of additional compensation expenses of $96,837 which were valued using the Black-Scholes-Merton valuation model with the following assumptions: risk free interest rates of 0.25% – 0.56%, dividend yield of 0%, volatility factors of the expected market price of common stock of 138%, and an expected life of 1.5. The aggregate amount of $309,417 has been reflected as additional compensation in the accompanying December 31, 2011 statement of operations.

During the year ended December 31, 2011, we issued 154,639 shares of our common stock for $150,000 valued at $0.97 per share pursuant to a Security Purchase Agreement with CardioNova (see Note 5). There were no commissions paid with respect to this sale to CardioNova.

During the year ended December 31, 2011, we issued 50,000 shares of our common stock valued at $1.45 per share or $72,500 in exchange for services provided. The shares issued were valued at the trading price at the date of the agreement.

During the year ended December 31, 2011, we issued 1,585,164 shares of our common stock pursuant to the conversion of $446,600 of Notes and accrued interest of $13,098 in accordance with the terms of the Notes. Additionally, as called for in the current accounting guidance regarding payment of current liabilities with equity, an additional charge of $14,000 was recorded in the current period statement of operations as a financing cost to reflect the current market value of the common stock issued to satisfy the accrued interest balance of the converted note.

During the year ended December 31, 2011, we issued 33,863 shares of our common stock to settle accounts payable valued at $72,999. The shares issued were valued at the trading price at the dates of issuance, with any differential of current market price over the accounts payable balance recognized as a cost during the period.

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 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, 2011 there were options to purchase up to 3,970,000 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, 2011, with respect to all stock option compensation arrangements.

	Number of securities to be issued upon	Weighted-average exercise price of outstanding	Number of securities remaining available for

Plan Category	exercise of outstanding options, and rights (a)		options, and rights (b)	future issuance under equity compensation plans (excluding securities reflected in column (a) (c)
Equity compensation plans approved by stockholders	3,970,000	$	1.17	392,964
Equity compensation plans not approved by stockholders	549,498		0.22	--
Total	4,519,498	$	0.94	392,964

During the year ended December 31, 2011, options to purchase 172,500 shares of the Company's common stock were granted to employees and directors under the 2010 Plan. The options vest 25% upon issuance, and then vest 25% on each anniversary date thereafter. The options have an exercise price of $1.01 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 $151,125 of which $56,657 was expensed upon the options' vesting schedules.

During the year ended December 31, 2011, options to purchase 100,000 shares of the Company's common stock were granted to a director under the 2010 Plan. The options vest 25% upon the first anniversary of the grant issuance, and 2.083% per month until fully vested. The options have an exercise price of $1.49 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 $136,000 of which $2,833 was expensed based on the option's vesting schedule.

During the period ended December 31, 2011, options to purchase 35,000 shares of the Company's common stock were granted to the Company's Chief Financial Officer under the 2010 Plan. The option vesting commences one month following the grant date at 2.083% per month until fully vested. The options have an exercise price of $1.25 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 $39,900 of which $2,493 was expensed based on the option's vesting schedule.

On June 1, 2011, the Company entered into an agreement with a consultant to purchase 50,000 shares of common stock at $1.01, which vest over a one year period. The company is valuing the vested options at each reporting date in accordance with the current accounting guidance which require option awards issued to non-employees be based upon the current market price as the services are performed using an option pricing model. As of December 31, 2011, a total of 25,000 option shares are vested with a fair value of $23,542, which was expensed during the year.

On June 1, 2011, the Company entered into an agreement with a consultant to perform certain development and regulatory activities. Under the terms of the agreement, the company issued to the consultant an option to purchase 500,000 shares of our common stock at $1.01 per share that vests over 48 months starting July 2011. Further, the Company committed an additional 1,500,000 option shares to the consultant under a product development plan calling for achievement of twelve (12) milestones set forth by the company. Upon achievement of these various milestones, the Company will be obligated to grant additional stock option of varying amounts. Once the options are granted, the options will vest on a monthly basis for a period of four years. In case the consultant terminates the relationship with the company during the vesting period, any unvested options will be forfeited. The company is valuing the vested options at each reporting date in accordance with the current accounting guidance which require option awards issued to non-employees be based upon the current market price as the services are performed using an option pricing model. As of December 31, 2011 a total of 62,500 option shares are vested with a fair value of $74,144, which was expensed during the year.

In September 2011 an option to purchase an additional 150,000 shares of our common stock at $0.95 per share was granted based on achievement of two (2) milestones committed to by the consultant under an agreed upon product development plan. The option vests over a 48 month period starting in October 2011. The company is valuing the vested options at each reporting date in accordance with the current accounting guidance which require option awards issued to non-employees be based upon the current market price as the services are performed using an option pricing model. As of December 31, 2011 a total of 9,375 option shares are vested with a fair value of $22,011, which was expensed during the period.

In December 2011, the remaining option to purchase an additional 1,350,000 shares of our common stock at $1.49 per share was granted as part of a modification of the consulting agreement. Vesting of this option is based upon achievement of the remaining ten (10) milestones in the product development plan and the option expires seven years after the grant date. Each milestone has a specified number of shares that fully vest upon the achievement of the milestone. In case the consultant terminates the relationship with the Company prior to achieving all ten milestones, any unvested options will be forfeited. The company is valuing the vested options at each reporting date in accordance with the current accounting guidance which require option awards issued to non-employees be based upon the current market price as the services are performed using an option pricing model. As of December 31, 2011, the consultant has not accomplished any of the vesting milestones and management will quantify the percentage of progress on the milestones for recognition of compensation expense associated with this grant, therefore, no compensation expense has been recorded in the period ended December 31, 2011.

A summary of the status of our stock options as of December 31, 2011 and changes during the period then ended is presented below:

	Shares	Weighted	Weighted	Aggregate

				average exercise price		Average Remaining Contractual Term (years)	Intrinsic Value
Outstanding at December 31, 2009		--	$	--		--	--
Granted		2,199,498	$	0.878		6.852	3,458,411
Exercised		--		--		--	--
Cancelled		--		--		--	--
Outstanding at December 31, 2010		2,199,498	$	0.878		6.852	3,458,411
Granted		2,357,500	$	1.307		6.746	--
Exercised		--		--		--	--
Cancelled		(37,500)		1.110		--	--
Outstanding at December 31, 2011		4,519,498	$	1.129		6.163	$ 1,140,059
Exercisable at December 31, 2011		976,220	$	0.912		5.539	$ 423,640
Weighted-average fair value of options granted during the twelve month period ended December 31, 2011	$	1.349					

During the year ended December 31, 2011, we recognized $449,014 of compensation costs related to the vesting of approximately 2.2 million options granted to employees or directors in prior years. As of December 31, 2011, the total compensation cost related to nonvested option awards not yet recognized was $4,136,117. The weighted average period over which it is expected to be recognized is approximately 3.5 years. The intrinsic value of the shares outstanding at December 31, 2010 was $3,458,411.

To compute compensation expense in 2011, we estimated the fair value of each option award on the date of grant using the Black-Scholes-Merton option pricing model. We based the expected volatility assumption on a volatility index of peer companies as we did not have sufficient market information to estimate the volatility of our own 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 employee forfeiture experiences. To determine the risk-free interest rate, we utilized the U.S. Treasury yield curve in effect at the time of grant 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, 2011:

	Outstanding			Vested and Exercisable		
Price per share	Shares	Weighted-Average Price per Share	Weighted-Average Remaining Contractual Life	Shares	Weighted-Average Price per Share	Weighted-Average Remaining Contractual Life
$0.223 – $0.223	549,498	$0.223	5.08 Years	263,303	$0.223	5.08 Years
$0.95 – $1.25	2,410,000	$1.07	5.91 Years	662,917	$1.08	6.67 Years
$1.49 – $2.38	1,560,000	$1.53	6.93 Years	50,000	$2.19	5.88 Years
	4,519,498			976,220		

The following table shows the weighted average assumptions we used to develop the fair value estimates for the determination of the compensation charges in 2011:

	Year ended December 31,	
	2011	2010
Expected volatility	134-138%	150%
Dividend yield	--	--
Expected term (in years)	2.75-6.25	6.25
Risk-free interest rate	0.64-2.19%	1.92%

Warrants

During the year ended December 31, 2011 as part of its sale of units of its common stock, we issued 923,862 warrants to purchase shares of our common stock. The warrants have a 3 year term from the date of purchase of the unit and are exercisable at $0.60 per share. Certain units were purchased by employees and service providers of the company and stock compensation expense of $96,837 was recognized for the bargain element of the 100,664 warrant shares represented by these transactions.

On March 29, 2011, we issued warrants to a service provider to purchase 21,000 shares of our common stock. The warrants vested immediately, had a term of 3 years and are exercisable at a purchase price of $0.50. The warrants were valued using the Black-Scholes-Merton option pricing model at $22,470 with the following assumptions: risk free interest rate of 2.25%, dividend yield of 0%, volatility factors of the expected market price of common stock of 140%, and an expected life of 3.0 years.

The following table provides detail with regard to warrants outstanding, vested and exercisable at December 31, 2011:

	Outstanding			Vested and Exercisable		
Price per share	Shares	Weighted-Average Price per Share	Weighted-Average Remaining Contractual Life	Shares	Weighted-Average Price per Share	Weighted-Average Remaining Contractual Life
$0.223	3,196,060	$0.223	2.53 Years	3,196,060	$0.223	2.53 Years
$0.393	1,908,798	$0.393	2.42 Years	1,908,798	$0.393	2.42 Years
$0.50	21,000	$0.50	2.25 Years	21,000	$0.50	2.25 Years
$0.60	923,862	$0.60	2.49 Years	923,862	$0.60	2.49 Years
$1.64	200,000	$1.64	4.00 Years	200,000	$1.64	4.00 Years
	6,249,720			6,249,720		

As of December 31, 2011 there are warrants to purchase 6,249,720 shares of our common stock outstanding with expiration dates ranging from February 2013 through December 2015 and exercise prices ranging from $0.22 to $1.64. A summary of the status of our warrants as of December 31, 2011 and 2010 and changes during the periods then ended is presented below:

Balance at December 31, 2009 (at $0.223)	1,457,852
Shares granted or assumed (at $0.223 - $1.64)	4,239,504
Shares exercised (at $0.223)	(392,498)
Balance at December 31, 2010 (at $0.223 - $1.64)	5,304,858
Shares granted (at $0.50 - $0.60)	944,862
Shares exercised	--
Ending balance at December 31, 2011 (at $0.223 - $1.64)	6,249,720

The intrinsic value of the warrants at December 31, 2011 was $5,836,939.

7. INCOME TAXES

Income Taxes

The provision for income taxes for the periods ended December 31, 2011, and 2010, was as follows (using a 42.8 percent effective Federal and state income tax rate):

	2011	2010
Current Tax Provision:		
Federal		
State	$ 5,640	$ 1,759
Total current tax provision	$ 5,640	$ 1,759
Deferred Tax Provision:		
Federal and state		
Loss carryforwards	$ (705,000)	$ (888,000)
Valuation allowance	705,000	$ 888,000
Total deferred tax provision	$ --	$ --

We had deferred income tax assets as of December 31, 2011, and 2010, as follows:

	2011	2010
Loss carryforwards	$ (1,735,000)	(963,000)
Less – valuation allowance	1,735,000	963,000
Total net deferred tax assets	$ --	$ --

As of December 31, 2011, we had net operating loss carryforwards for income tax reporting purposes of approximately $4,054,000 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, 2011.

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.

8. SUBSEQUENT EVENTS

On January 3, 2012, we issued 50,000 options to a member of the Company's Board of Directors to purchase shares of our common stock at $1.30 per share. The option vests over 4 years and has a fair value of approximately $58,000 determined using the Black-Scholes Option Pricing Method.

On February 13, 2012 we issued 50,000 shares of our common stock to a service provider valued at $60,000 based on the market value of our common stock on the date of issuance.

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, 2011, 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, 2011, 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, 2011. 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 the Company's 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 the Company's internal control over financial reporting was effective as of December 31, 2011.

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, 2011 that have materially affected, or that are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

None.

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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. 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	58	Chairman, Chief Executive Officer and President
Mark Selawski	56	Chief Financial Officer and Secretary
Gary Freeman	44	Director and Chairman of the Audit Committee
Boris Ratiner, M.D.	44	Director and Chairman of the Medical Committee
Paul DiPerna	53	Director and Chairman of the Compensation Committee
Chaim Davis	34	Director
Alexander Polinsky, Ph.D.	56	Director
Johan (Thijs) Spoor	39	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.

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 which he founded in 2005. He is also currently serving as a healthcare industry consultant to KOM Capital Management, LLC, and several other investment firms. 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.

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.

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.

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 provides that the authorized number of directors will be seven, 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 the estate of Filiberto Zadini, Giorgio Zadini, Boris Ratiner and Thomas W. Gardner), currently Thomas W. Gardner, Boris Ratiner, M.D. and Filiberto Zadini, two 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 and Chaim Davis, 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 Paul DiPerna.

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, 2011, 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

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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, 2011 and 2010, to the Company's named executive officers:

Name and Principal Position	Year	Salary ($)	Option Awards ($)	All Other Compensation ($)	Total ($)
Eric Stoppenhagen (1)	2011	$ --	--	--	$ --
Interim President and Secretary	2010	$ 20,000	--	--	20,000
Thomas W. Gardner (2)	2011	--	--	149,417	149,417
Chairman, Chief Executive Officer and President	2010	--	1,010,000	90,000	1,100,000
Mark Selawski (3)	2011	$ 142,125	39,900	--	$ 182,025
Chief Financial Officer and Secretary	2010	$ 91,000	365,200	25,000	$ 481,200

(1) Mr. Stoppenhagen served as our Interim President and Secretary from September 2007 through May 2010 pursuant to a Consulting Agreement we entered into with Venor Consulting, Inc. ("Venor") on September 27, 2007. Under the terms of the Consulting Agreement, Venor performed certain consulting services for us with respect to, among other things, the provision of executive services (including, without limitation, providing the services of Mr. Stoppenhagen as our Interim President and Secretary). We paid Venor a monthly fee for certain of the services to be provided, with additional services to be billed at an hourly rate. We terminated this agreement on May 13, 2010.

(2) 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.

(3) Mr. Selawski serves as our Chief Financial Officer and Secretary under an Employment Agreement dated August 30, 2010, the terms of which are described below, and has served in these capacities since May 2010. The fair value of options granted to Mr. Selawski was estimated on the date of grant using the Black-Scholes Model with the following weighted-average assumptions:

Year	Risk Free Interest Rate	Volatility	Term	Dividends
2011	1.68%	136.00%	6.25 years	--

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.

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.

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, 2011.

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)	312,500	687,500	1.11	08/30/17
Mark Selawski (3)	263,303	286,195	0.22	01/06/17
Mark Selawski (4)	78,125	171,875	1.11	08/30/17
Mark Selawski (5)	1,458	33,542	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 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.

(5) 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, 2011.

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, 2011.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)	Total ($)
Gary Freeman (1)	12,500	34,875	47,375
Boris Ratiner (2)	12,500	170,875	183,375
Chaim Davis (3)	12,500	34,875	47,375
Alexander Polinsky (4)	7,500	23,250	30,750
Paul DiPerna (5)	7,500	23,250	30,750
Johan (Thijs) Spoor (6)	--	--	--

(1) 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. Freeman was estimated on the date of grant using the Black-Scholes Model with the following weighted-average assumptions:

Year	Risk Free Interest Rate	Volatility	Term	Dividends
2011	2.19%	138.00%	6.25 years	--

(2) The aggregate number of common shares reserved under option awards outstanding at fiscal year-end totaled 212,500. The fair value of options granted to Mr. Ratiner was estimated on the date of grant using the Black-Scholes Model with the following weighted-average assumptions:

Year	Risk Free	Volatility	Term	Dividends

	Interest Rate			
		134.0	6.25	
2011	1.48-2.19%	-138.0%	years	--

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(3) 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. Davis was estimated on the date of grant using the Black-Scholes Model with the following weighted-average assumptions:

Year	Risk Free Interest Rate	Volatility	Term	Dividends
2011	2.19%	138.00%	6.25 years	--

(4) 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. Polinsky was estimated on the date of grant using the Black-Scholes Model with the following weighted-average assumptions:

Year	Risk Free Interest Rate	Volatility	Term	Dividends
2011	2.19%	138.00%	6.25 years	--

(5) 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. DiPerna was estimated on the date of grant using the Black-Scholes Model with the following weighted-average assumptions:

Year	Risk Free Interest Rate	Volatility	Term	Dividends
2011	2.19%	138.00%	6.25 years	--

(6) Mr. Spoor was appointed as a member of our board of directors on January 3, 2012 and received no compensation for his service as a member of our board of directors in 2011.

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 March 1, 2011: (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 March 30, 2011 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.

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The information presented in this table is based on 28,440,260 shares of our common stock outstanding on March xx, 2012. 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)	3,737,437	12.9	%
Mark Selawski (2)	443,133	1.5	%
Boris Ratiner, MD (3)	2,962,579	9.9	%
Chaim Davis(4)	46,875	*	
Gary Freeman(4)	46,875	*	
Alexander Polinsky, PhD(5)	31,250	*	
Paul DiPerna(5)	31,250	*	
Johan (Thijs) Spoor(6)	45,000	*	
Directors and Executive Officers as a Group(7)	7,344,399	23.7	%
5% Stockholders:			
Giorgio Zadini, MD 2237 Hilltop Lane Camarillo, CA 93012	5,636,372	19.8	%
Estate of Filiberto Zadini, MD 2237 Hilltop Lane Camarillo, CA 93012	6,078,122	21.4	%

* Less than 1%

(1) Includes 375,000 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding stock options and 47,168 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding warrants.

(2) Includes 407,218 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding stock options and 5,700 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding warrants.

(3) Includes 46,875 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding stock options and 1,457,852 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding warrants.

(4) Includes 46,875 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding stock options.

(5) Includes 31,250 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding stock options.

(6) Includes 12,500 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding stock options and 7,500 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding warrants.

(7) Includes 997,843 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding stock options and 1,518,220 shares issuable within 60 days of March 1, 2012 upon exercise of presently outstanding warrants.

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Changes 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, 2011.

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)	3,970,000	$ 1.25	392,964
Equity compensation plans not approved by security holders (2)	3,745,558	$ 0.22	--
Total	7,715,558	$ 0.75	392,964

(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.

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

Transactions with Officers and Directors

Other than the transactions described below, since January 1, 2010, 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 December 31, 2007, we executed a Demand Promissory Note (the "Demand Note") payable to Landbank Acquisition LLC ("Landbank"), in the principal amount of $500,000 with simple interest on the unpaid principal from the date of the note at the rate of eight percent (8%) per annum. Landbank was related to us through common major stockholders. The Demand Note was due on demand.

On October 19, 2009, we entered into a Revolving Promissory Note (the "Revolving Note") with Landbank. Under the terms of the Revolving Note, Landbank agreed to advance to us, from time to time and at our request, amounts up to an aggregate of $500,000 until October 19, 2010. All advances had to be paid on or before October 19, 2010 and interest accrued from the date of any advances on any principal amount withdrawn, and on accrued and unpaid interest thereon, at the rate of eight percent (8%) per annum, compounded annually. Our obligations under the Revolving Note would accelerate upon our bankruptcy, any default by us of our payment obligations under the Revolving Note or our breach of any provision of any material agreement between us and Landbank.

In connection with Landbank's sale to each of Europa and Woodman Management Corporation, the predecessor in interest to W-Net ("Woodman"), on October 19, 2009, of 198,278 shares of our common stock, the Demand Note was assigned to Woodman and Europa in equal parts. The Revolving Note was cancelled, and new notes (the "Replacement Notes") were issued by us to Woodman and Europa on October 19, 2009. The Replacement Notes contained identical terms and conditions to the Revolving Note, except that each Replacement Note provided that the noteholder would advance up to $250,000. Woodman transferred all of our securities, the portion of the Demand Note and the Replacement Note held by Woodman to W-Net on April 12, 2010. At the Closing, we converted all outstanding indebtedness under the Demand Note and the Replacement Notes, other than an aggregate amount of $250,000, into 90,166 shares of our common stock. We repaid the remaining $250,000 from the proceeds of the Capital Raise Transaction, with payments of $125,000 going to each of W-Net and Europa.

On May 11, 2011, we sold 79,500 units to Thomas W. Gardner, our Chief Executive Officer, at $0.55 per unit, resulting in gross proceeds to us of $43,725. Each unit represents a share of our common stock and a warrant to purchase 0.30 shares of our common stock at an exercise price of $0.60 per share. The warrants, exercisable to purchase 23,850 shares of our common stock, are fully vested and exercisable for three years from the date of issuance.

On September 27, 2011, we sold 77,725 units to Thomas W. Gardner, our Chief Executive Officer, at $0.55 per unit, resulting in gross proceeds to us of $42,758.75. Each unit represents a share of our common stock and a warrant to purchase 0.30 shares of our common stock at an exercise price of $0.60 per share. The warrants, exercisable to purchase 23,318 shares of our common stock, are fully vested and exercisable for three years from the date of issuance.

On September 27, 2011, we sold 19,000 units to Mark Selawski, our Chief Financial Officer, at $0.55 per unit, resulting in gross proceeds to us of $10,450. Each unit represents a share of our common stock and a warrant to purchase 0.30 shares of our common stock at an exercise price of $0.60 per share. The warrants, exercisable to purchase 5,700 shares of our common stock, are fully vested and exercisable for three years from the date of issuance.

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.

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 the 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 $69,505 for the fiscal year ended December 31, 2011.

Audit-Related Fees

None.

Tax Fees

During fiscal year 2011, we recorded accounting/professional fees totaling $2,866 that were billed to us by Weinberg for the preparation of our 2010 and 2009 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: March 16, 2012	By:	/s/ Thomas W. Gardner Thomas W. Gardner Chairman, Chief Executive Officer & President (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 Thomas W. Gardner	Chairman, Chief Executive Officer and President (Principal Executive Officer)	March 16, 2012
/s/ Mark Selawski Mark Selawski	Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	March 16, 2012
/s/ Chaim Davis Chaim Davis	Director	March 16, 2012
/s/ Gary Freeman Gary Freeman	Director	March 16, 2012

/s/ Boris Ratiner, M.D. Boris Ratiner, M.D.	Director	March 16, 2012
/s/ Alexander Polinsky Alexander Polinsky	Director	March 16, 2012
/s/ Paul DiPerna Paul DiPerna	Director	March 16, 2012
/s/ Johan (Thijs) Spoor Johan (Thijs) Spoor	Director	March 16, 2012

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. **
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	Registration Rights 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 10.4 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	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.
10.4	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.
10.5	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.
10.6	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.

10.7	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. †
10.8	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. †
10.9	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. *
10.10	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. *
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.