UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark one)

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 0-5576

SPHERIX INCORPORATED

(Exact name of Registrant as specified in its Charter)

Delaware	**52-0849320**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

6430 Rockledge Drive, Suite 503, Bethesda, Maryland 20817
(Address of principal executive offices)

Registrant's telephone number, including area code: **301-897-2540**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock ($.01 par value per share)	NASDAQ Capital Market

Securities registered pursuant to Section 12(g) of the Act: **None.**

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o

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

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company (as defined in Rule 12b-2 of the Exchange Act).

Large Accelerated Filer o	Accelerated Filer o
Non-accelerated Filer o	Smaller Reporting Company x

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

State 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, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter (for purposes of this determination, only our Directors and Executive Officers have been deemed affiliates): Common Stock (Par Value $.01) — $2,981,215

There were 4,159,776 shares of the Registrant's Common Stock outstanding as of March 26, 2012.

PART I

SPECIAL CAUTIONARY NOTICE REGARDING FORWARD LOOKING STATEMENTS

Certain statements contained in this Form 10-K, including without limitation, statements containing the words "believes," "estimates," "expects" and words of similar import, constitute "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. Such words and expressions are intended to identify such forward looking statements, but are not intended to constitute the exclusive means of identifying such statements. Such forward looking statements involve known and unknown risks, uncertainties and other factors that may

cause the actual results, performance or achievements of the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward looking statements. Given these uncertainties, prospective investors are cautioned not to place undue reliance on such forward looking statements. The Company disclaims any obligation to update any such factors or to publicly announce the results of any revisions to any of the forward looking statements contained herein to reflect any events or developments.

Item 1. BUSINESS

General

Spherix Incorporated (the "Company" or "Spherix"), a Delaware corporation, was founded in 1967. The Company's principal segments are Biospherics, our biotechnology research and development business, and Health Sciences, a technical and regulatory consulting business.

The Company has created two wholly-owned subsidiaries, Biospherics Incorporated and Spherix Consulting, Inc., for its two operating segments. The Company's Health Sciences contracts are in the name of Spherix Consulting, Inc. and the Company's patents are in the name of Biospherics Incorporated. Spherix provides management, strategic guidance, business development, marketing and other services to its subsidiaries.

The principal executive offices of the Company are located at 6430 Rockledge Drive, Suite 503, Bethesda, Maryland 20817, and its telephone number is (301) 897-2540.

The Company's common stock trades on the NASDAQ Capital Market system under the symbol SPEX.

Available Information

Our principal Internet address is www.spherix.com. We make available free of charge on www.spherix.com our annual, quarterly and current reports, and amendments to those reports, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission ("SEC").

Biospherics

Biospherics is dedicated to development of pharmaceuticals. Our strategy to achieve this development is to:

- utilize our clinical development capabilities to manage and drive drug candidates through the clinical development process to approval;
- identify and explore licensing and partnership opportunities for drug candidates;
- seek to acquire medically important drug candidates in early- to mid-stage clinical development; and
- commercialize our drug candidates, either alone or more likely in partnership, which we believe can provide maximum stockholder value.

Recently, the Company has focused its studies on treating high triglycerides and other dyslipidemias with a combination of D-tagatose and SPX-106, a licensed drug compound, which combination is referred to as SPX-106T. Animal studies of SPX-106T are ongoing and an initial human efficacy study could begin in mid-2012.

Tagatose, a naturally occurring sugar, is a low-calorie, full-bulk sweetener previously approved by the U.S. Food and Drug Administration ("FDA") as a GRAS (Generally Recognized As Safe) food ingredient. It is a true sugar that looks, feels, and tastes like table sugar. During human safety studies supporting food use, we discovered and patented a number of health and medical uses for D-tagatose.

Until June 2010, our activity was limited to developing D-tagatose as a novel, first-in-class treatment for Type 2 diabetes. In June 2010, the Company announced that it would seek a pharma partner to continue the diabetes development and that it would also explore D-tagatose as a potential treatment for high triglycerides, a risk factor for atherosclerosis, myocardial infarction, and stroke. The Company has begun such exploration and is also evaluating other drug compounds it has licensed from the University of Kentucky.

The Company is also exploring the possibility of increasing its pipeline of potential products by obtaining by license or acquisition other clinical stage compounds/orphan drugs for continued development and commercialization. Orphan drug status by the FDA is usually applied to products where the number of patients in the United States in the given disease category is typically less than 200,000. The European Medicines Agency ("EMA") adopted a similar system termed "The Regulation of Orphan Medicinal Products." These Orphan drug indications typically require more modest investment in the development stages, followed by a quicker regulatory path to approval.

Triglycerides and Other Dyslipidemias

Secondary endpoints of our diabetes trials included triglyceride measurements. High triglyceride levels are sometimes a symptom of conditions associated with heart disease such as obesity and metabolic syndrome, which is a condition associated with elevated glucose levels as well as excess fat around the waist, high blood pressure, high triglycerides, low HDL cholesterol, and other dyslipidemias. Although our Phase 2 and Phase 3 diabetes trials were not primarily designed to measure the impact of D-tagatose on high triglycerides, we were encouraged enough to continue with pursuit of this project. Our Phase 2 data showed that by the end of the six-month trial, the 7.5g dose reduced triglycerides by approximately 23% versus the 2.5g dose. Further studies with a larger sample size will be needed to establish statistically significant results.

The program to investigate SPX-106T to lower serum triglycerides and other dyslipidemias has begun. SPX-106 appears to be more potent than D-tagatose and as a result we are no longer pursuing D-tagatose alone. The combination of effects in anabolic and catabolic pathways make SPX-106T more attractive. We have engaged a leading global contract research organization to investigate the role of D-tagatose and SPX-106T in lowering triglycerides and other dyslipidemias and are also working with academic institutions. We are conducting animal studies and will likely conduct human studies in order to fully explore the mechanism of action in lipid metabolism, including triglycerides as well as LDL and HDL cholesterol, and atherosclerosis. The commercial intent of the triglyceride program is to develop a formulation, dose and dosing regimen appropriate for the lipid market segment and uniquely different from the diabetes market. Thus, our intent is to develop a completely new, second brand for triglycerides and other dyslipidemias, separate from the diabetes brand. Our goal is to produce a robust proof of concept in Phase 2 clinical study, and then seek a pharma partner for further development of the triglycerides

and other dyslipidemias drug product. We estimate that it will likely take up to 3 or more years to complete the studies/trials necessary to attract a pharma partner to complete the development and an additional 2-4 years to complete all necessary studies for an NDA filing.

We expect to incur substantial development costs in our Biospherics segment in the next several years, without substantial corresponding revenue. We intend to finance our development activities through the remaining net proceeds of our previous equity offerings and additional funds we will seek to raise through the sale of additional stock in the future.

Diabetes

We have conducted a Phase 3 trial to determine efficacy of D-tagatose as a treatment for Type 2 diabetes and a Phase 2 Dose Range trial to evaluate the effectiveness of lower doses of D-tagatose in treating Type 2 diabetes. D-tagatose is believed to depress elevations of blood sugar levels in diabetic patients by increasing glycogen synthesis while decreasing glycogen utilization, resulting in an improvement of blood sugar control and modulation of HbA1c. HbA1c is a key indicator that measures glycated hemoglobin in the blood and is a measure of long-term control of blood glucose. Glucose is a sugar molecule that serves as a primary energy storage mechanism and glycogen is a molecule that functions as secondary long-term energy storage in humans. D-tagatose works in part by affecting glycogen levels.

In spite of favorable Phase 3 and Phase 2 results, the cost burden of developing drugs specifically for diabetes has increased significantly within the last few years under evolving and more stringent FDA guidelines. In 2010, we determined that continued development of D-tagatose as a treatment for Type 2 diabetes required the involvement of a pharma partner with the resources needed to fund the rest of the development and bring it to market. We have actively sought a pharma partner, but have not yet been successful. We are no longer expending any significant resources in this search, but will continue to be open to any appropriate partnership arrangement. In addition, the patents have now expired, which may further limit our ability to attract a partner. European regulatory requirements are significantly lower and we believe Europe represents a better opportunity for development, especially given the longer exclusivity period granted to a new chemical entity.

Manufacturing

We do not own or operate our own manufacturing facilities, and have purchased SPX-106 and D-tagatose from toll manufacturers who also produce other compounds. We have adequate inventories of D-tagatose and SPX-106 to conduct a year or more of animal and human clinical trials. In addition, we have identified potential manufacturers for additional amounts of these compounds, but there can be no assurance that we will be able to acquire all needed products.

License

Biospherics and University of Kentucky Research Foundation (“UKRF”) have entered into a License Agreement pursuant to which UKRF has granted Biospherics an exclusive worldwide license to commercialize certain compounds including SPX-106. Upon commercialization, UKRF is entitled to royalties generally equal to 3% of net sales. UKRF has the right to terminate the license agreement if Biospherics fails to continue its commercialization efforts.

Revenue

Biospherics revenue from miscellaneous royalties accounted for 1% of our total revenue from continuing operations in 2010 and none in 2011.

Health Sciences

Our Health Sciences business provides technical and regulatory consulting services to biotechnology and pharmaceutical companies, as well as providing technical support for our R&D activities.

During 2011 and 2010, Health Sciences provided services to 20 and 23 companies, respectively. We generally provide our services on either a fixed-price basis or a “time and expenses” basis, charging hourly rates for each staff member involved in a project, based on his or her skills and experience. Our engagement agreements typically provide for monthly billing and payment of our invoices within thirty days of receipt.

The projects range from safety analyses of food ingredients to safety analyses of pharmaceutical manufacturing and dispensing equipment. Many clients are large, well-known companies with a number of successful products on the market. The proliferation of new products in the food and pharmaceutical areas creates a growing need for such regulatory services.

Revenues are primarily derived from services provided in response to client requests or events that occur without notice, and engagements, generally billed as services are performed, are terminable or subject to

postponement or delay at any time by clients. Revenues and operating margins for any particular quarter are generally affected by staffing mix, resource requirements, and timing and size of engagements.

Health Sciences is also monitoring and directing the clinical trials for Biospherics.

Health Sciences revenue accounted for 100% and 99% of our total revenue in 2011 and 2010, respectively.

Government Contracts

None.

Industry Segments

See Note 12, “Information by Business Segment,” of the Notes to the Financial Statements included herein pursuant to Part II, Item 8 of this Form 10-K for industry segment information of the Company, which information is incorporated herein by reference.

Market Concentration

During 2011 and 2010, 100% and 99% of our revenue was generated from the Health Sciences business, respectively. In 2011, revenue from four customers accounted for 20%, 15%, 12% and 11% of revenue, respectively. In 2010, revenue from one customer accounted for 10% of revenue. No other single customer accounted for 10 percent or more of consolidated revenue. The loss of any of these customers could have a material adverse effect on us if not replaced.

Patents

The following patents are pending:

Title	Filing Date	Status
D-Tagatose-Based Compositions And Methods For Preventing And Treating Atherosclerosis, Metabolic Syndrome And Symptoms Thereof	November 4, 2009	Pending*

*Licensed from the UKRF

In addition to our patent position, we rely on the common law protection of such information as trade secrets and on confidentiality agreements to protect the value of these assets.

Trademarks

We have trademarked each of “Spherix” and “Biospherics.”

Sales Backlog

Our backlog as of December 31, 2011 and 2010 from the Health Sciences business was approximately $318,000 and $308,000, respectively. We bill for our consulting services primarily on a fixed-price basis or a time and expense basis and these amounts represent estimated contract values. Further, our consulting contracts are generally terminable or subject to postponement or delay at any time by clients. As a result, backlog at any particular time is not a reliable indicator of revenues for any future periods.

Competition

Biospherics

Competitors of Biospherics are numerous and include, among others, major pharmaceutical, chemical, consumer, and biotechnology companies; specialized firms; universities and other research institutions. Our

competitors may succeed in developing technologies and products that are more effective than any that are being developed by us, and that could render our technology and potential products obsolete and noncompetitive. Many of these competitors have substantially greater financial and technical resources and production and marketing capabilities. In the triglyceride market, the main categories of pharmaceutical agents include: fenofibrates (Tricor®, gemfibrozil, generics) with global sales of $2.2 billion; niacin-based agents (with sales of $1 billion globally) and the Omega-3 oil products (Lovasa®/GSK) with prescription sales approaching $1 billion globally.

Health Sciences

Competitors of Health Sciences are numerous, including some that are much larger companies with more resources. The segment’s success in winning and retaining clients is heavily dependent on the efforts and reputation of its CEO. We believe the barriers to entry in particular areas of our consulting expertise are low.

Research and Development

Biospherics expenditures for research and development were approximately $1.6 million and $4.8 million in 2011 and 2010, respectively. These expenditures were incurred in the ongoing efforts to commercialize D-tagatose and SPX-106T.

Governmental Regulation

Our business activities are subject to a variety of Federal and state compliance, licensing, and certification requirements. Products such as D-tagatose and SPX-106T may not be commercially marketed as drugs without prior approval from the FDA and comparable agencies in foreign countries. In the United States, the process for obtaining FDA approval typically includes pre-clinical studies, the filing of an Investigational New Drug application (“IND”), human clinical trials and filing and approval of a New Drug Application (“NDA”). The FDA may, at any time, impose a clinical hold on ongoing clinical trials. If the FDA imposes a clinical hold, clinical trials cannot commence or recommence without FDA authorization and then only under terms authorized by the FDA.

The results of the trials and other information are then submitted to the FDA in the form of an NDA for review and potential approval to commence commercial sales. In responding to an NDA, the FDA may grant marketing approval, request additional information in a complete response letter, or deny the approval if it determines that the NDA does not provide an adequate basis for approval. A complete response letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA and may require additional testing. If and when those conditions have been met to the FDA's satisfaction, the FDA will typically issue an approval letter, which authorizes commercial marketing of the product with specific prescribing information for specific indications. Any approval required from the FDA might not be obtained on a timely basis, if at all.

Among the conditions for NDA approval is the requirement that the manufacturing operations conform on an ongoing basis with current Good Manufacturing Practices ("cGMP"). A successful inspection of the manufacturing facility by the FDA is a prerequisite for final approval. Following approval of the NDA, the third-party manufacturer(s) remain subject to periodic inspections by the FDA. We also face similar inspections coordinated by the EMA by inspectors from particular European Union member countries that conduct inspections on behalf of the European Union and from other foreign regulatory authorities. Any determination by the FDA or other regulatory authorities of manufacturing or other deficiencies could materially adversely affect our business.

In general, regulatory requirements and approval processes in European Union ("EU") countries are similar in principle to those in the United States and can be at least as costly and uncertain. The European Union has established a unified centralized filing and approval system administered by the Committee for Medicinal Products for Human Use designed to reduce the administrative burden of processing applications for pharmaceutical products derived from new technologies. In addition to obtaining regulatory approval of products, it is generally necessary to obtain regulatory approval of the facility in which the product will be manufactured.

However, U.S. and EU requirements differ dramatically for antidiabetic medications. In the U.S. the FDA guidance requires 2/3 more subjects to be studied than in the EU, and also markedly increases the duration of the

studies both for efficacy and safety. In addition, the FDA requirements for evaluating the cardiovascular risks associated with Type 2 anti-diabetic medications markedly increase the study populations while also studying patients with relatively advanced diabetes, some degree of renal impairment and at higher risk of cardiovascular events.

Requirements for the development of drugs to lower triglycerides and other dyslipidemias have not changed and are similar in both the U.S. and EU. The development program is considerably simpler than with Type 2 antidiabetic medications, with a smaller number of subjects to be studied and clinical studies of substantially shorter duration to demonstrate efficacy and safety of the drugs.

We are required to comply with the Sarbanes-Oxley Act of 2002, including the provisions of Section 404 on the assessment of internal controls as modified for non-accelerated filers. Starting with our year ended December 31, 2007, we performed an annual evaluation of the effectiveness of our internal control over financial reporting and reports on management's assessment of the adequacy of those controls in our annual reports on Form 10-K.

The increase in accounting related regulations over the years, particularly those governing public companies, has had the effect of increasing our cost for external accounting services, from 0.3% of revenue in 1997 ($40,000) to 32% in 2011 ($259,000).

Environment

Compliance with current federal, state and local provisions regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, has not had, and in the opinion of management will not have, a material effect on our financial position, results of operations, capital expenditures, cash flows or competitive position.

Employees

We employ 10 individuals, all on a full-time basis.

Item 1A. Risk Factors

An investment in our securities involves a high degree of risk and should be considered only by those persons who are able to afford a loss of their entire investment. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by any forward-looking statement. In particular, you should consider the numerous risks outlined below. Those risk factors are not exhaustive.

RISKS ASSOCIATED WITH PRODUCT DEVELOPMENT

OUR POTENTIAL TRIGLYCERIDES AND OTHER DYSLIPIDEMIAS DRUG IS AT A VERY EARLY STAGE OF DEVELOPMENT. We are "starting at the beginning" in our development of a triglycerides and other dyslipidemias drug. We have begun with animal studies and may progress to human studies and trials. We expect that it could take three or more years to complete the studies/trials necessary to attract a pharma partner to complete the development and an additional 2-4 years to complete all necessary studies for an NDA filing. There can be no assurance that any of these studies/trials will be successful or that we will develop the necessary proof of concept required to attract a pharma partner.

WE MAY NOT OBTAIN RIGHTS TO ANY OTHER CLINICAL STAGE COMPOUNDS/ORPHAN DRUGS. Despite our best efforts, we may not be able to obtain via license or acquisition rights to any other clinical stage/compounds/orphan drugs. In such an event, our future will be solely determined by our ability to find a strategic partner for D-tagatose as a diabetes drug and the success of our development of our triglycerides drug.

ANY ACQUISITIONS OR CLINICAL STAGE COMPOUNDS/ORPHAN DRUGS WE MAKE MAY REQUIRE A SIGNIFICANT AMOUNT OF OUR AVAILABLE CASH AND MAY NOT BE

SCIENTIFICALLY OR COMMERCIALLY SUCCESSFUL. As part of our business strategy, we may effect acquisitions of chemical stage compounds/orphan drugs to augment our pipeline. If we make one or more significant acquisitions in which the consideration includes cash, we may be required to use a substantial portion of our available cash. Further, the types of clinical stage compounds drugs we are seeking will likely be at a fairly early stage of development and actual research and development costs could exceed budgeted amounts and estimated time frames may require extension. Cost overruns, unanticipated regulatory delays or demands, unexpected adverse side effects or insufficient efficacy could prevent or substantially slow our research and development effort.

OUR POTENTIAL TRIGLYCERIDES AND OTHER DYSLIPIDEMIAS DRUG IS DEPENDENT UPON OUR LICENSE OF THE SPX-106 COMPOUND. We have licensed the rights to commercialize the SPX-106 compound from the University of Kentucky Research Foundation and our ability to continue this development will depend upon our continued maintenance of our rights under this license agreement. If we fail to remain in compliance with this license agreement, we could lose the right to continue to develop SPX-106T.

WE WILL LIKELY RELY ON OTHER LICENSE AGREEMENTS AS WE SEEK TO DEVELOP ADDITIONAL COMPOUNDS/ORPHAN DRUGS. We will likely enter into additional license agreements to obtain rights to develop additional compounds/orphan drugs as well as additional license agreements with the University of Kentucky Research Foundation or other research institutions for continued research and development. These license agreements may require us to meet development milestones and impose development and commercialization due diligence requirements on us. In addition, under these agreements, we will likely be required to pay royalties on sales of products resulting from licensed technologies and pay the patent filing, prosecution and maintenance costs related to the licenses. If we do not meet our obligations in a timely manner or if we otherwise breach the terms of our license agreements, our licensors could terminate the agreements, and we would lose the rights to our drug candidates. From time to time, we may have disagreements with our licensors or collaborators, or they and/or we may have disagreements with the original inventors, regarding the terms of our agreements or ownership of proprietary rights, which could lead to delays in the research, development and commercialization of our drug candidates, could require or result in litigation or arbitration, which would be time-consuming and expensive, or could lead to the termination of a license, or force us to negotiate a revised or new license agreement on terms less favorable than the original.

IF WE ARE UNABLE TO COMPLETE OUR CLINICAL TRIAL PROGRAMS SUCCESSFULLY, OR IF SUCH CLINICAL TRIALS TAKE LONGER TO COMPLETE THAN WE PROJECT, OUR ABILITY TO EXECUTE OUR CURRENT BUSINESS STRATEGY WILL BE ADVERSELY AFFECTED. Whether or not and how quickly we complete clinical trials is dependent in part upon the rate at which we are able to engage clinical trial sites and, thereafter, the rate of enrollment of patients, and the rate we collect, clean, lock and analyze the clinical trial database. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the study, the existence of competitive clinical trials, and whether existing or new drugs are approved for the indication we are studying. Certain clinical trials are designed to continue until a pre-determined number of events have occurred in the patients enrolled. Trials such as this are subject to delays stemming from patient withdrawal and from lower than expected event rates. They may also incur additional costs if enrollment is increased in order to achieve the desired number of events. If we experience delays in identifying and contracting with sites and/or in patient enrollment in our clinical trial programs, we may incur additional costs and delays in our development programs, and may not be able to complete our clinical trials in a cost-effective or timely manner. In addition, conducting multi-national studies adds another level of complexity and risk. We are subject to events affecting countries outside the United States. Negative or inconclusive results from the clinical trials we conduct or unanticipated adverse medical events could cause us to have to repeat or terminate the clinical trials. We may also opt to change the delivery method, formulation or dosage, which could affect efficacy results for the drug candidate. Accordingly, we may not be able to complete the clinical trials within an acceptable time frame, if at all.

Additionally, we have never filed an NDA or similar application for approval in the United States, or in any country, which may result in a delay in, or the rejection of, our filing of an NDA or similar application. During the drug development process, regulatory agencies will typically ask questions of drug sponsors. While we endeavor to answer all such questions in a timely fashion, or in the NDA filing, some questions may remain unanswered by the

time we file our NDA. Unless the FDA opts not to pursue answers to these questions, submission of an NDA may be delayed or rejected.

PRE-CLINICAL TESTING AND CLINICAL DEVELOPMENT ARE LONG, EXPENSIVE AND UNCERTAIN PROCESSES. IF OUR DRUG CANDIDATES DO NOT RECEIVE THE NECESSARY REGULATORY APPROVALS, WE WILL BE UNABLE TO COMMERCIALIZE OUR DRUG CANDIDATES. We have not received, and may never receive, regulatory approval for the commercial sale of any of our drug candidates. We will need to conduct significant additional research and human testing before we can apply for product approval with the FDA or with regulatory authorities of other countries. Pre-clinical testing and clinical development are long, expensive and uncertain processes. Satisfaction of regulatory requirements typically depends on the nature, complexity and novelty of the product. It requires the expenditure of substantial resources. Data obtained from pre-clinical and clinical tests can be interpreted in different ways, which could delay, limit or prevent regulatory approval. The FDA may pose additional questions or request further clinical substantiation. It may take us many years to complete the testing of our drug candidates and failure can occur at any stage of this process. Negative or inconclusive results or medical events during a clinical trial could cause us to delay or terminate our development efforts.

Furthermore, interim results of preclinical or clinical studies do not necessarily predict their final results, and acceptable results in early studies might not be obtained in later studies.

Clinical trials have a high risk of failure. A number of companies in the pharmaceutical industry, including biotechnology companies, have suffered significant setbacks in advanced clinical trials, even after achieving what appeared to be promising results in earlier trials. If we experience delays in the testing or approval process or if we need to perform more or larger clinical trials than originally planned, our financial results and the commercial prospects for our drug candidates may be materially impaired. In addition, we have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approval in the United States and abroad. Accordingly, we may encounter unforeseen problems and delays in the approval process. Although we may engage a clinical research organization with experience in conducting regulatory trials, errors in the conduct, monitoring and/or auditing could potentially invalidate the results.

OUR PATENT PROTECTION MAY NOT BE SUFFICIENT TO PROTECT US. At present we only have rights for patents pending for triglycerides and other dyslipidemias treatment. There can be no assurance these patents will be issued. There has been no official action yet on the patents and key claims might not be allowed.

WE MAY NOT BE ABLE TO FIND A STRATEGIC PARTNER FOR OUR DIABETES DRUG CANDIDATE. We have ceased expending any significant sums searching for a pharma partner to continue development of D-tagatose as a treatment for Type 2 diabetes. Accordingly, we may not obtain any benefit from the substantial investment we have made in these efforts over the past several years.

WE DO NOT CURRENTLY HAVE THE RESOURCES TO BECOME A FULL SCALE BIOTECHNOLOGY COMPANY AND WE MAY NOT BE ABLE TO ATTRACT A NECESSARY BUYER/LICENSEE/PARTNER/STRATEGIC PARTNER BEFORE WE EXPEND ALL OF OUR FUNDS. We intend to continue to develop SPX-106T as a viable treatment for triglycerides and other dyslipidemias and to continuously seek a sale, license, or partner. Our hope and expectation is that as we proceed with the development, incremental successes may allow us to negotiate a favorable transaction. There can be no assurance, however, that we will have such incremental successes, or even if we achieve them, that we will attract a buyer, licensee or partner. We have limited resources. We will need to raise additional funds in 2012 to continue operations and will likely require additional capital raises thereafter to fully pursue the triglycerides and other dyslipidemias opportunity and we may not be able to do so in a timely fashion.

REGULATORY AUTHORITIES MAY NOT APPROVE OUR PRODUCTS EVEN IF THEY MEET SAFETY AND EFFICACY ENDPOINTS IN CLINICAL TRIALS. The FDA and foreign regulatory agencies can delay, limit or deny marketing approval for many reasons, including:

- a product candidate may not be considered safe or effective;

- the manufacturing processes or facilities we have selected may not meet the applicable requirements; and
- changes in approval policies or adoption of new regulations may require additional work on our part.

Any delay in, or failure to receive or maintain, approval for our drug candidates could prevent us from ever generating meaningful revenues.

Our products may not be approved even if they achieve endpoints in clinical trials. Regulatory agencies, including the FDA, or their advisors may disagree with our trial design and our interpretations of data from preclinical studies and clinical trials. Regulatory agencies may change requirements for approval even after a clinical trial design has been approved. Regulatory agencies may also approve a product candidate for fewer or more limited indications than requested, or may grant approval subject to the performance of post-marketing studies. In addition, regulatory agencies may not approve the labeling claims that are necessary or desirable for the successful commercialization of our products.

OUR FINANCIAL RESOURCES ARE LIMITED AND WE WILL NEED TO RAISE ADDITIONAL CAPITAL IN THE FUTURE TO CONTINUE OUR BUSINESS. We expect that we will need to expend approximately $5 million over the next twelve (12) months to support our currently planned development operations. Our future capital requirements will depend on many factors, including the progress of the clinical trials and commercialization of our products, including any additional compounds/products we acquire and attempt to develop, as well as general and administrative costs. We will need to raise additional funds in 2012 to continue operations and will likely require additional capital raises thereafter to fully pursue the triglycerides and other dyslipidemias opportunity. We cannot ensure that additional funding will be available or, if it is available, that it can be obtained on terms and conditions we will deem acceptable. Any additional funding derived from the sale of equity securities is likely to result in significant dilution to our existing stockholders. These matters involve risks and uncertainties that may prevent us from raising additional capital or may cause the terms upon which we raise additional capital, if additional capital is available, to be less favorable to us than would otherwise be the case. If we reach a point where we are unable to raise needed additional funds to continue as a going concern, we will be forced to cease our development activities and dissolve the Company. In such an event, we will need to satisfy various severances, lease termination and other dissolution-related obligations.

UNSTABLE MARKET CONDITIONS MAY HAVE SERIOUS ADVERSE CONSEQUENCES ON OUR BUSINESS. The recent economic downturn and market instability have made the business climate more volatile and more costly. Our general business strategy may be adversely affected by unpredictable and unstable market conditions, including:

- one or more of our current service providers, manufacturers and other partners may encounter difficulties during challenging economic times, which would directly affect our ability to attain our goals on schedule and on budget;
- demand for our consulting services may decrease, resulting in a decrease in revenue;
- our ability to collect on trade receivables may be negatively impacted by slow payments or bad debt;
- our efforts to raise additional capital may be negatively impacted;
- additional funding may not be available or, if it is available, may not be on terms and conditions we deem acceptable;
- any additional funding derived from the sale of equity securities is likely to result in significant dilution to our existing stockholders; and
- failure to secure the necessary financing in a timely manner and on favorable terms could have a material adverse effect on our business strategy, financial performance, and stock price and could require us to delay or abandon the clinical development plans.

IF CLINICAL TRIALS ARE PROLONGED, DELAYED OR SUSPENDED, IT MAY TAKE SIGNIFICANTLY LONGER AND COST SUBSTANTIALLY MORE TO OBTAIN APPROVAL FOR OUR DRUG CANDIDATES AND ACHIEVE PROFITABILITY, IF AT ALL. Each delay makes it more likely that we will need additional financing to complete our clinical trials. We cannot predict whether we will encounter

additional problems that will cause us or regulatory authorities to delay or suspend the clinical trial, or delay the analysis of data from the trials. Any of the following could delay the clinical development of our drug candidates:

- ongoing discussions with the FDA regarding the scope or design of our trial;
- delays in receiving, or the inability to obtain, required approvals from reviewing entities at clinical sites selected for participation in our trial;
- a lower than anticipated retention rate of patients in the trial;
- the need to repeat the trial or conduct another trial as a result of inconclusive or negative results or unforeseen complications in testing;
- inadequate supply or deficient quality of materials necessary to conduct our trial;
- serious and unexpected drug-related side effects experienced by participants in our clinical trials;
- the placement by the FDA of a clinical hold on a trial; or

- any restrictions on or post-approval commitments with regard to any regulatory approval we ultimately obtain that render the drug candidate not commercially viable.

WE WILL RELY ON THIRD PARTIES TO CONDUCT PORTIONS OF OUR TRIALS, AND THOSE THIRD PARTIES MAY NOT PERFORM SATISFACTORILY. We will rely on third parties to purchase animals and conduct preclinical studies, to enroll qualified patients, conduct our trials, provide services in connection with such trials, and coordinate and oversee significant aspects of the trials. Our reliance on these third parties for preclinical and clinical development activities reduces our control over these activities. Accordingly, these third party contractors may not complete activities on schedule, or may not conduct our trials in accordance with regulatory requirements or the trial design. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may be required to replace them or we may be required to provide these services with our own personnel. Although we believe there are a number of third party contractors we could engage to continue these activities, replacing a third party contractor may result in a delay or affect the trial. If this were to occur, our efforts to obtain regulatory approvals for and commercialize our drug candidate may be delayed.

OUR CORPORATE COMPLIANCE EFFORTS CANNOT GUARANTEE THAT WE ARE IN COMPLIANCE WITH ALL POTENTIALLY APPLICABLE REGULATIONS. The development, manufacturing, pricing, sales, and reimbursement of drug products are subject to extensive regulation by federal, state and other authorities within the United States and numerous entities outside of the United States. We are a relatively small company with only 10 employees. We also have significantly fewer employees than many other companies that have a product candidate in clinical development, and we rely heavily on third parties to conduct many important functions. While we believe that our corporate compliance program is sufficient to ensure compliance with applicable regulation, we cannot assure that we are or will be in compliance with all potentially applicable regulations. If we fail to comply with any of these regulations we could be subject to a range of regulatory actions including suspension or termination of clinical trials, the failure to approve our product candidate, restrictions on our products or manufacturing processes, withdrawal of products from the market, significant fines, or other sanctions or litigation.

WE DO NOT HAVE INTERNAL MANUFACTURING CAPABILITIES, AND IF WE FAIL TO DEVELOP AND MAINTAIN SUPPLY RELATIONSHIPS WITH OUTSIDE MANUFACTURERS, WE MAY BE UNABLE TO DEVELOP OR COMMERCIALIZE OUR PRODUCTS. Our ability to develop and commercialize our products will depend in part on our ability to arrange for other parties to manufacture our products at a competitive cost, in accordance with regulatory requirements and in sufficient quantities for clinical testing and eventual commercialization. If we are unable to enter into or maintain commercial-scale manufacturing agreements on acceptable terms, or if we are unable to successfully bridge material from a manufacturer to the material initially used in the trials, the development and commercialization of our products could be delayed, which would adversely affect our ability to generate revenues and would increase our expenses.

FAILURE TO OBTAIN REGULATORY APPROVAL IN FOREIGN JURISDICTIONS WOULD PREVENT MARKETING OF OUR PRODUCTS. We intend to have our products marketed both inside and outside of the United States. In order to market our products in the European Union and many other foreign jurisdictions, we must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required

to obtain approval may differ from that required to obtain FDA approval. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not obtain foreign regulatory approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or by the FDA. We and our collaborators may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize our products in any market. The failure to obtain these approvals could materially adversely affect our business, financial condition and results of operations.

EVEN IF OUR CLINICAL TRIALS ARE SUCCESSFUL, WE MAY NOT HAVE A COMMERCIALLY VIABLE DRUG OR PRODUCT. We have a number of hurdles to overcome to have a commercially viable drug or product even assuming our clinical trials are successful, including:

- We must secure one or more manufacturers for our products and we must bridge the materials supplied by the current manufacturer(s) to the previously supplied materials to gain FDA approval.
- We must demonstrate that the product will be accepted in the market place. Even if the clinical trial is successful, the market may not accept the drug formulation or dosing.

IF PHYSICIANS AND PATIENTS DO NOT ACCEPT OUR PRODUCTS, WE MAY NOT BE ABLE TO GENERATE SIGNIFICANT REVENUES FROM PRODUCT SALES. Even if we obtain regulatory approval for our products, they may not gain market acceptance among physicians, patients and the medical community for a variety of reasons including:

- timing of market introduction of competitive drugs;
- lower demonstrated clinical safety and efficacy compared to other drugs;
- lack of cost-effectiveness;
- lack of availability of reimbursement from managed care plans and other third-party payors;
- inconvenient administration;
- prevalence and severity of adverse side effects;
- drug interactions with other widely prescribed medications;
- potential advantages of alternative treatment methods;
- safety concerns with similar drugs marketed by others;
- the reluctance of the target population to try new therapies and of physicians to prescribe these therapies; and
- ineffective sales, marketing and distribution support.

If our products fail to achieve market acceptance, we would not be able to generate significant revenue or achieve profitability.

THE BIOTECHNOLOGY BUSINESS HAS A SUBSTANTIAL RISK OF PRODUCT LIABILITY CLAIMS. THE DEFENSE OF ANY PRODUCT LIABILITY CLAIM BROUGHT AGAINST US WILL DIVERT MANAGEMENT TIME AND REQUIRE SIGNIFICANT EXPENSE. We could be exposed to significant potential product liability risks that are inherent in the development, manufacture, sales and marketing of drugs and related

products. Our insurance may not, however, provide adequate coverage against potential liabilities. Furthermore, product liability insurance is becoming increasingly expensive. As a result, we may be unable to maintain current amounts of insurance coverage or obtain additional or sufficient insurance at a reasonable cost to protect against losses that could have a material adverse effect on us. If a claim is brought against us, we might be required to pay legal and other expenses to defend the claim, as well as uncovered damage awards resulting from a claim brought successfully against us. Furthermore, whether or not we are ultimately successful in defending any such claims, we might be required to redirect significant financial and managerial resources to such defense, and adverse publicity is likely to result.

WE HAVE SUSTAINED LOSSES IN THE PAST AND WE WILL SUSTAIN LOSSES IN THE FORESEEABLE FUTURE. We have incurred losses from operations in prior years, including 2011 and 2010. Our net losses for the years ended December 31, 2011 and 2010 were $3.5 million and $7.7 million, respectively.

The Company's cumulative deficit was $37.1 million at December 31, 2011. We expect to incur substantial losses for the foreseeable future. We may not return to profitable operations.

WE MAY NOT BE ABLE TO RETAIN OUR KEY EXECUTIVES AND PERSONNEL. As a small company, our success depends on the services of key employees in executive and other positions. The loss of the services of one or more of such employees could have a material adverse effect on us.

WE FACE INTENSE COMPETITION. Our competitors include many companies, research institutes and universities that are working in a number of pharmaceutical or biotechnology disciplines to develop therapeutic products similar to those we are currently investigating. Most of these competitors have substantially greater financial, technical, manufacturing, marketing, distribution and/or other resources than we do. In addition, many of our competitors have experience in performing human clinical trials of new or improved therapeutic products and obtaining approvals from the FDA and other regulatory agencies. Our competitors may succeed in developing or marketing biotechnology products that are more effective than ours.

HEALTH CARE REFORM MEASURES COULD ADVERSELY AFFECT OUR BUSINESS. The business prospects and financial condition of pharmaceutical and biotechnology companies are affected by the efforts of governmental and third-party payors to contain or reduce the costs of health care. In the U.S. and in foreign jurisdictions there have been, and we expect that there will continue to be, a number of legislative and regulatory proposals aimed at changing the health care system, such as proposals relating to the pricing of healthcare products and services in the U.S. or internationally, the reimportation of drugs into the U.S. from other countries (where they are then sold at a lower price), and the amount of reimbursement available from governmental agencies or other third party payors. Furthermore, in the U.S., health care reform legislation titled the Patient Protection and Affordable Care Act was signed into law on March 23, 2010. This comprehensive legislation will affect the terms of public and private health insurance and have a substantial impact on the pharmaceutical industry. For example, the new law will impose an annual fee on manufacturers of branded prescription pharmaceuticals that will impact our products. Regulations to implement this and other provisions related to the research, marketing and sale of prescription pharmaceutical products could result in a decrease in our stock price or limit our ability to raise capital or to obtain strategic partnerships or licenses. Government-financed comparative efficacy research could also result in new practice guidelines, labeling or reimbursement policies that discourages use of our products.

WE FACE EVOLVING REGULATION OF CORPORATE GOVERNANCE AND PUBLIC DISCLOSURE THAT MAY RESULT IN ADDITIONAL EXPENSES AND CONTINUING UNCERTAINTY. Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, SEC regulations and NASDAQ Stock Market LLC rules are creating uncertainty for public companies. We are presently evaluating and monitoring developments with respect to new and proposed rules and cannot predict or estimate the amount of the additional costs we may incur or the timing of these costs. For example, compliance with the internal control requirements of Section 404 of the Sarbanes-Oxley Act has to date required the commitment of significant resources to document and test the adequacy of our internal control over financial reporting. While our assessment, testing and evaluation of the design and operating effectiveness of our internal control over financial reporting resulted in our conclusion that, as of December 31, 2011, our internal control over financial reporting was effective, we can provide no assurance as to conclusions of management with respect to the effectiveness of our internal control over financial reporting in the future. These new or changed laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We are committed to maintaining high standards of corporate governance and public disclosure. As a result, we intend to invest the resources necessary to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new or changed laws, regulations and standards differ from the activities intended by regulatory or governing bodies, due to ambiguities related to practice or otherwise, regulatory authorities may initiate legal proceedings against us, which could be costly and time-consuming, and our reputation and business may be harmed.

RISKS RELATED TO OWNERSHIP OF OUR COMMON STOCK

THE PRICE OF OUR COMMON STOCK HAS BEEN HIGHLY VOLATILE DUE TO SEVERAL FACTORS THAT WILL CONTINUE TO AFFECT THE PRICE OF OUR STOCK. Our common stock has traded as low as $0.78 and as high as $21.00 between January 1, 2010 and March 26, 2012. Some of the factors leading to this volatility include:

- relatively small amounts of our stock trading on any given day;
- fluctuations in our operating results;
- announcements of technological innovations or new products that we or our competitors make;
- developments with respect to patents or proprietary rights; and
- recent economic downturn and market instability.

OUR COMMON STOCK MAY BE DELISTED FROM NASDAQ CAPITAL MARKET SYSTEM IF WE FAIL TO COMPLY WITH CONTINUED LISTING STANDARDS. Our common stock is currently traded on the NASDAQ Capital Market under the symbol "SPEX." If we fail to

meet any of the continued listing standards of the NASDAQ Capital Market, our common stock could be delisted from the NASDAQ Capital Market. These continued listing standards include specifically enumerated criteria, such as:

- a $1.00 minimum closing bid price;
- shareholders' equity of $2.5 million;
- 500,000 shares of publicly-held common stock with a market value of at least $1 million;
- 300 round-lot stockholders; and
- compliance with NASDAQ's corporate governance requirements, as well as additional or more stringent criteria that may be applied in the exercise of NASDAQ's discretionary authority.

On two separate occasions in the last few years, NASDAQ has notified the Company that its common stock failed to maintain a minimum bid price of $1.00 as required by the NASDAQ Listing Rules. In both cases, the Company's stock price increased over the $1.00 threshold before NASDAQ delisted the stock. In May 2011, the Company effected a 1 for 10 reverse stock split which immediately preceded the stock price increase. Our stock is currently trading below the $1.00 minimum bid price and we therefore risk NASDAQ delisting.

WE COULD FAIL IN FINANCING EFFORTS OR BE DELISTED FROM NASDAQ IF WE FAIL TO RECEIVE SHAREHOLDER APPROVAL WHEN NEEDED. We are required under the NASDAQ rules to obtain shareholder approval for any issuance of additional equity securities that would comprise more than 20% of the total shares of our common stock outstanding before the issuance of such securities sold at a discount to the greater of book or market value in an offering that is not deemed to be a "public offering" by NASDAQ. Funding of our operations in the future may require issuance of additional equity securities that would comprise more than 20% of the total shares of our common stock outstanding, but we might not be successful in obtaining the required shareholder approval for such an issuance. If we are unable to obtain financing due to shareholder approval difficulties, such failure may have a material adverse effect on our ability to continue operations.

DIVIDENDS ON OUR COMMON STOCK ARE NOT LIKELY. We do not anticipate paying cash dividends on our common stock in the foreseeable future. Investors must look solely to appreciation in the market price of the shares of our common stock to obtain a return on their investment.

BECAUSE OF THE RIGHTS AGREEMENT AND "ANTI-TAKEOVER" PROVISIONS IN OUR CERTIFICATE OF INCORPORATION AND BYLAWS, A THIRD PARTY MAY BE DISCOURAGED FROM MAKING A TAKEOVER OFFER THAT COULD BE BENEFICIAL TO OUR STOCKHOLDERS. In 2001, we adopted a shareholder rights plan. In December 2010, we extended the term of this plan through December 31, 2012. The effect of this rights plan and of certain provisions of our Certificate of Incorporation, By-Laws, and the anti-takeover provisions of the Delaware General Corporation Law, could delay or prevent a third party from acquiring us or replacing members of our Board of Directors, even if the acquisition or the replacements would be beneficial to our stockholders. These factors could also reduce the price that certain investors might be willing to pay for shares of the common stock and result in the market price being lower than it would be without these provisions.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

The Company's office is located in Bethesda, Maryland, where it leases 5,000 square feet of office space under a lease that expires March 31, 2018. The capacity of the Bethesda facility is adequate for the Company's current needs.

Item 3. LEGAL PROCEEDINGS

We are not a party to any material legal proceedings as of the date of this filing.

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.

As of March 26, 2012, the number of shareholders of record of the Company's common stock was approximately 195. The Company's common stock is traded in the over-the-counter market and is quoted in the NASDAQ Capital Market System under the symbol SPEX. No dividends were paid in 2011 or 2010.

The following table states the high and low sales prices of the Company's common stock for each quarter during the two year period ended December 31, 2011, based on the daily high and low prices as reported by NASDAQ:

	High	Low
1st Quarter 2011	$ 10.90	$ 3.50
2nd Quarter 2011	$ 5.86	$ 2.28
3rd Quarter 2011	$ 3.48	$ 1.23
4th Quarter 2011	$ 3.42	$ 1.13
1st Quarter 2010	$ 19.60	$ 11.00
2nd Quarter 2010	$ 14.70	$ 10.00
3rd Quarter 2010	$ 19.40	$ 11.60

4th Quarter 2010	$	21.00	$	5.20

On November 24, 2010, the Company received written notification (the "Notice") from NASDAQ advising the Company that the bid price of the Company's common stock for the previous thirty (30) consecutive trading days had closed below the minimum $1.00 per share (the "Minimum Price Requirement") required for continued listing on the NASDAQ Capital Market.

On May 24, 2011, following the reverse stock split described below, the Company received notification from NASDAQ confirming that it has regained compliance with the minimum bid price requirement for continued listing on NASDAQ under Listing Rule 5550(a)(2). In the letter, NASDAQ stated that this matter is now closed.

Our stock is currently trading below $1.00 minimum bid price and we therefore risk NASDAQ delisting.

On May 6, 2011, the Company effected a one-for-ten reverse split of its common stock. The Company implemented the reverse stock split under the authority granted to the Board of Directors by the Company's stockholders at the annual meeting of stockholders held on November 17, 2009, to effect a reverse stock split of the Company's common stock. The reverse stock split reduced the number of outstanding shares of common stock from 25,624,872 shares to 2,562,488 shares. All per share amounts and outstanding shares, including all common stock equivalents, stock options, equity compensation plans, and warrants, have been retroactively restated in the Financial Statements and in the Notes to the Financial Statements for all periods presented to reflect the reverse stock split. On the Company's balance sheet, the aggregate par value of the common stock at December 31, 2010 was retroactively reduced by $85,746 with an off-setting increase to paid-in capital in excess of par.

On February 2, 2012, the Company entered into a securities purchase agreement with certain investors to sell an aggregate of 1,064,815 shares of its common stock and warrants to purchase up to an additional 212,963 shares of its common stock to such investors for gross proceeds of approximately $1.15 million. The common stock and warrants were sold in units, with each unit consisting of one share of common stock and a warrant to purchase 0.2 of a share of common stock. The purchase price per unit was $1.08. Subject to certain ownership limitations, the warrants are exercisable for a five-year period at an exercise price of $1.40. The exercise price of the warrants is subject to adjustment in the case of stock splits, stock dividends, combinations of shares and similar recapitalization transactions. The net proceeds to the Company from the registered direct offering, after deducting placement agent fees and the Company's offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, were approximately $1.1 million. The common stock issued in the February 2012 offering and the common stock that may be issued pursuant to the exercise of the warrants have been registered pursuant to a Form S-3 registration statement (File No. 333-161531), which became effective on October 1, 2009, and are classified as permanent equity.

In connection with the closing of our February 2012 offering, the Company issued to Rodman & Renshaw, LLC, as partial consideration for its services as placement agent, warrants with a term of two years to purchase up to 31,944 shares of our common stock at an exercise price of $1.35 per share. The estimated fair value of the warrants at the date of grant was $19,000. These warrants were offered and sold by us in reliance upon exemptions from the registration statement requirements by Section 4(2) of the Securities Act of 1933, as amended, as transactions by an issuer not involving a public offering.

In October 2011, the Company entered into a securities purchase agreement with certain investors to sell an aggregate of 532,559 shares of its common stock and warrants to purchase up to an additional 532,559 shares of its common stock to such investors for gross proceeds of approximately $1.25 million. The common stock and warrants were sold in units, with each unit consisting of one share of common stock and a warrant to purchase one share of common stock. The purchase price per unit was $2.365. Subject to certain ownership limitations, the warrants are exercisable for a five-year period at an exercise price of $2.24 per share. The exercise price of the warrants is subject to adjustment in the case of stock splits, stock dividends, combinations of shares and similar recapitalization transactions. The net proceeds to the Company from the offering, after deducting placement agent fees and the Company's offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, were approximately $1.1 million. The common stock issued in the October 2011 offering and the common stock that may be issued pursuant to the exercise of the warrants were registered with the Securities and Exchange Commission pursuant to a registration statement on Form S-3 (File No. 333-177748), which became effective on November 21, 2011, and are classified as permanent equity.

In connection with the closing of the October 2011 offering, the Company issued to Rodman & Renshaw, LLC warrants with a term of two years to purchase 15,977 shares of our common stock (at an exercise price of $2.95 per share). The estimated fair value of the warrants at the date of grant was $25,000. These warrants were offered and sold by us in reliance upon exemptions from the registration statement requirements by Section 4(2) of the Securities Act of 1933, as amended, as transactions by an issuer not involving a public offering.

On January 19, 2011, the Company entered into a securities purchase agreement with certain investors to sell an aggregate of 426,900 shares of its common stock and warrants to purchase up to an additional 213,450 shares of its common stock to such investors for gross proceeds of approximately $2.77 million. The common stock and warrants were sold in units, with each unit consisting of one share of common stock and a warrant to purchase 0.50 of a share of common stock. The purchase price per unit was $6.50. Subject to certain ownership limitations, the warrants are exercisable for a five-year period at an exercise price of $8.00. The exercise price of the warrants is

subject to adjustment in the case of stock splits, stock dividends, combinations of shares and similar recapitalization transactions. The net proceeds to the Company from the registered direct offering, after deducting placement agent fees and the Company's offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, were approximately $2.6 million. The common stock issued in the January 2011 offering and the common stock that may be issued pursuant to the exercise of the warrants have been registered pursuant to a Form S-3 registration statement (File No. 333-161531), which became effective on October 1, 2009, and are classified as permanent equity.

In connection with the closing of our January 2011 offering, the Company issued to Rodman & Renshaw, LLC, as partial consideration for its services as placement agent, warrants with a term of two years to purchase up to 12,807 shares of our common stock at an exercise price of $8.125 per share. The estimated fair value of the warrants at the date of grant was $42,000. These warrants were offered and sold by us in reliance upon exemptions from the registration statement requirements by Section 4(2) of the Securities Act of 1933, as amended, as transactions by an issuer not involving a public offering.

On October 7, 2010, the Company and certain investors entered into a securities purchase agreement, pursuant to which the Company agreed to sell an aggregate of 5,250 shares of its Series B Convertible Preferred Stock and warrants to purchase up to an additional 210,000 shares of its common stock to such investors for gross proceeds of approximately $5.25 million. Each share of Series B Convertible Preferred Stock was convertible at the option of the holder, at any time, into 80 shares of common stock based on a conversion price of $12.50 per share of Series B Convertible Preferred Stock. The preferred stock and warrants were sold in units, with each unit consisting of one share of preferred stock and a warrant to purchase 0.5 of a share of common stock. The purchase price per unit was $1,000.00. Subject to certain ownership limitations, the warrants are exercisable for a five-year period at an exercise price of $15.00 per share. The exercise price of the warrants is subject to adjustment in the case of stock splits, stock dividends, combinations of share and similar recapitalization transactions. The net proceeds to the Company from the October 2010 offering, after deducting placement agent fees and the Company's offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, were approximately $4.9 million. The preferred stock, warrants to purchase common stock (including the placement agent warrants) and shares of common stock issuable upon conversion of the preferred stock and exercise of the warrants were issued pursuant to a prospectus filed with the Securities and Exchange Commission pursuant to a registration statement on Form S-1 (File No. 333-167963), which became effective on October 6, 2010, and are classified as permanent equity.

In connection with the closing of the October 2010 offering, the Company issued to Rodman & Renshaw, LLC warrants with a term of two years to purchase 12,600 shares of our common stock (at an exercise price of $15.625 per share). The estimated fair value of the warrants at the date of grant was $49,000. These warrants were offered and sold by us in reliance upon exemptions from the registration statement requirements by Section 4(2) of the Securities Act of 1933, as amended, as transactions by an issuer not involving a public offering.

In the late fall of 2011, the Company amended its certificate of incorporation to increase the maximum number of shares of common stock it may issue to 50,000,000 shares.

Equity Compensation Plan Information

The following table provides information about the Company's common stock that may be issued upon the exercise of options and rights under all of the Company's existing 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	61,109(1)	$ 5.35	22,514**(3)**
Equity compensation plans not approved by securities holders	28,784(2)	$ 5.26	N/A
Total	89,893		22,514

(1) Consists of options to acquire 48,509 shares of our common stock issued to our key employees and directors; and warrants to purchase 12,600 shares of our common stock issued to our placement agent in connection with the October 2010 offering. On August 31, 2010, our stockholders provided the Board of Directors the authority to issue securities which led to the October 2010 offering.

(2) Consists of warrants to purchase 28,784 shares of our common stock issued to our placement agent with respect to the January 2011 and October 2011 offerings.

(3) Consists of shares of common stock available for future issuance under our equity incentive plan.

Item 6. SELECTED FINANCIAL DATA

Not applicable.

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

Overview

The Company operates via two segments, Biospherics and Health Sciences. Biospherics seeks to develop proprietary pharmaceutical products. Health Sciences provides technical and regulatory consulting services to food, consumer products, biotechnology and pharmaceutical companies, as well as providing technical support to the Biospherics segment.

Biospherics is dedicated to development of pharmaceuticals. Recently, the Company has focused its studies on treating high triglycerides and other dyslipidemias with a combination of D-tagatose and SPX-106, a licensed drug compound, which combination is referred to as SPX-106T. Animal studies of SPX-106T are ongoing and an initial human efficacy study could begin in mid-2012.

Tagatose, a naturally occurring sugar, is a low-calorie, full-bulk sweetener previously approved by the Food and Drug Administration ("FDA") as a GRAS (Generally Recognized As Safe) food ingredient. It is a true sugar that looks, feels, and tastes like table sugar. During human safety studies supporting food use, we discovered and patented a number of health and medical uses for D-tagatose.

Until June 2010, development was limited to developing D-tagatose as a novel, first-in-class treatment for Type 2 diabetes. In June 2010, the Company announced that it would seek a pharma partner to continue the diabetes development and that it would also explore D-tagatose as a potential treatment for high triglycerides, a risk factor for atherosclerosis, myocardial infarction, and stroke. The Company has begun such exploration and is also evaluating other drug compounds it has licensed from the UKRF.

The Company is also exploring the possibility of increasing its pipeline of potential products by obtaining by license or acquisition other clinical stage compounds/orphan drugs for continued development and commercialization. Orphan drug status by the FDA is usually applied to products where the number of patients in the United States in the given disease category is typically less than 200,000. The European Medicines Agency adopted a similar system termed "The Regulation of Orphan Medicinal Products." These Orphan drug indications typically require more modest investment in the development stages, followed by a quicker regulatory path to approval.

We have incurred negative cash flow from operations each of the most recent fiscal years. We anticipate incurring negative cash flows from operating activities for the foreseeable future. We have spent, and expect to continue to spend, substantial amounts in connection with implementing our business strategy, including our product development efforts.

Results of Operations—2011 Compared with 2010

Revenue and Direct Costs

Revenue and direct contract costs are primarily related to the Company's Health Sciences business. The consulting business generally provides services on either a fixed-price basis or a "time and expenses" basis, charging hourly rates for each staff member involved in a project, based on his or her skills and experience. Engagement agreements typically provide for monthly billing and payment within thirty (30) days of receipt, and permit clients to terminate engagements at any time. The Health Sciences consulting staff also provides support for our R&D activities and the decrease in direct costs of $130,000 between years reflects an increase in the staff's time devoted to developing study protocols and other support for the Company's R&D activities (see Research and Development below). This shift in resources accounted for approximately half of the $612,000 decrease in revenue between years. Lower effective rates on 2011 contracts in comparison to 2010 contracts accounted for the rest of the decrease in revenue between years as a result of changing demand in the market for Health Science based consulting services. During 2011 and 2010, Health Sciences provided services to 20 and 23 companies, respectively.

No substantial revenue is expected from the Biospherics segment until the Company is successful in selling or licensing its technology.

Research and Development

Research and development expenditures relate solely to the Biospherics segment and consist primarily of salaries and related personnel costs, fees paid to consultants and outside service providers, and other expenses related to our efforts to develop D-tagatose and SPX-106T for future commercialization. We expense our research and development costs as they are incurred.

The clinical trials in the use of D-tagatose for the treatment of Type 2 diabetes was the primary focus of the Biospherics segment during 2010. Beginning in the fourth quarter of 2010, the Company began shifting the focus of its R&D efforts to the use of SPX-106T in lowering triglyceride and cholesterol levels. The shift from late stage trials to a pre-clinical trial resulted in a decrease in R&D costs between years; the Company anticipates that R&D costs will begin to increase again with the progression of triglyceride and cholesterol studies.

An application for an Investigational New Drug ("IND") for the D-tagatose and SPX-106 combination drug is being prepared for submission to the US FDA, and a human proof-of-concept trial may begin in mid-2012. Combination therapy is an important tool in many complex disease settings, including cancer, infectious diseases, cardiovascular disease, diabetes and the metabolic syndrome. Scientific progress has increased understanding of the pathophysiological processes that underlie these and other multifactorial diseases. This increased knowledge has advanced new therapeutic approaches using combinations of drugs targeted at multiple therapeutic targets to improve treatment response and/or minimize development of drug resistance. In settings like metabolic syndrome, in which combination therapy may offer significant therapeutic advantages, there is increasing interest in the development of combinations of investigational drugs not previously developed for any purpose.

We estimate that it will likely take 3 or more years to complete the studies/trials necessary to attract a pharma partner to complete the development and an additional 2-4 years to complete all necessary studies for an NDA filing for D-tagatose or SPX-106T.

The Company is seeking to in-license or acquire additional drugs to diversify its pipeline. Clinical-stage compounds (Phase 1 or Phase 2) are of particular interest, as are orphan drugs, which can be eligible for accelerated approval processes.

As noted, the Phase 3 trial to determine efficacy of D-tagatose as a treatment for Type 2 diabetes and the Phase 2 Dose Range trial to evaluate the effectiveness of lower doses of D-tagatose in treating Type 2 diabetes were both completed in late 2010.

Selling, General and Administrative

Our selling, general and administrative (S,G&A) expenses consist primarily of salaries and related expenses for executive, finance and other administrative personnel, professional fees and other corporate expenses, including facilities-related expenses. S,G&A expenses for 2011 decreased $946,000 (23%) from those of the prior year. The decrease between years was primarily attributable to a scaling down of the Company's business development activities for the use of D-tagatose as a treatment for Type 2 diabetes, which included consultants, market research and other related costs. The Company expects that it will see an increase in S,G&A costs in 2012 as we seek, investigate and pursue opportunities to expand our research and development pipeline.

Interest Income

Interest income in 2011 and 2010 was primarily derived from interest earned on the net proceeds of our equity offerings. The decrease in interest income between years is attributable to the decrease in funds available for investing.

Other Income

In October 2010, the Company was awarded two one-time grants from the U.S. Government under the Patient Protection and Affordable Care Act. The awards were for the Company's 2009 and 2010 diabetes and triglyceride research. As a result, in 2011 and 2010 the Company recognized $39,000 and $136,000 in other income, net of a related tax expense of $14,000 and tax benefit of $133,000, respectively.

Gain on Settlement of Obligations

On January 14, 2011, Biospherics Incorporated, a wholly-owned subsidiary of the Company, filed a Complaint For Injunction Relief And Damages in The United States District Court For The District Of Maryland against Inalco S.p.A. (the "Complaint"). The Complaint alleged that Inalco had breached the 2009 Manufacturing Support and Supply Agreement as Inalco (i) refused to supply D-tagatose previously paid for by Biospherics, (ii) refused to provide a promised bank guarantee, and (iii) shut-down its D-tagatose production facilities. On March 16, 2011, both parties signed a settlement agreement whereby Inalco agreed to supply Spherix with 8.5 metric tons of D-tagatose, which has been received by Spherix, and both parties have agreed to release each other from any other obligations under the previous agreement. As a result, the Company recognized a gain of $600,000 in March 2011 on the release from its purchase obligation.

In January 2011, the Company entered into a Letter Agreement with Gilbert V. Levin and M. Karen Levin pursuant to which the Company agreed to make a one time lump sum payment of $450,000 to the Levins in full satisfaction of the Company's obligation to make a series of continuing payments to the Levins relating to their prior employment by the Company. Per the terms of the agreement, Gilbert V. Levin resigned as a member of the Board of Directors of the Company on January 13, 2011. The Company's estimated liability to the Levins at December 31, 2010, and prior to the above agreement was approximately $695,000. The $450,000 lump sum payment was made on January 31, 2011, and the Company recognized the $245,000 difference as a gain on settlement of obligations in January 2011.

Income Tax (Expense) Benefit

The 2011 income tax expense and the 2010 income tax benefit was directly related to the above mentioned U.S. government grants in the Other Income discussion.

Sales Backlog

The Company's backlog as of December 31, 2011 and 2010 (consisting solely of backlog from the Health Sciences business) was approximately $317,000 and $308,000, respectively. The Company bills for its consulting services primarily on a time and expense basis and these amounts represent estimated contract values. Further, the Company's consulting contracts are generally terminable or subject to postponement or delay at any time by clients. As a result, backlog at any particular time is not a reliable indicator of revenues for any future periods.

Critical Accounting 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 the reported amounts of assets and liabilities and the disclosure of the contingent assets and liabilities at the date of the financial statements and revenue and expenses for the period reported. Estimates are based upon historical experience and various other assumptions that are believed to be reasonable under the circumstances. These estimates are evaluated periodically and form the basis for making judgments regarding the carrying values of assets and liabilities and the reported amount of revenue and expenses. Actual results may differ substantially from these estimates.

Spherix's critical accounting policies are those it believes are the most important in determining its financial condition and results, and require significant subjective judgment by management as a result of inherent uncertainties. A summary of the Company's significant accounting policies is set out in the notes to the consolidated financial statements. Such policies are discussed below.

Accounting for Taxes and Valuation Allowances

We currently have significant deferred tax assets, resulting from net operating loss carry forwards. These deferred tax assets may reduce taxable income in future periods. Based on the Company's losses and its accumulated deficit, the Company has provided a full valuation allowance against the net deferred tax asset. Cumulative losses weigh heavily in the overall assessment of valuation allowances.

We expect to continue to maintain a full valuation allowance on future tax benefits until an appropriate level of profitability is sustained, or we are able to develop tax strategies that would enable us to conclude that it is more likely than not that a portion of our deferred tax assets would be realizable.

New Accounting Pronouncements

In May 2011, the FASB issued a new accounting standard on fair value measurements that clarifies the application of existing guidance and disclosure requirements, changes certain fair value measurement principles and requires additional disclosures about fair value measurements. We are required to adopt this standard in the first quarter of 2012. We do not expect this adoption to have a material impact on our financial statements.

In June 2011, the FASB issued a new accounting standard on the presentation of comprehensive income. The new standard requires the presentation of comprehensive income, the components of net income and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. The new standard also requires presentation of adjustments for items that are reclassified from other comprehensive income to net income in the statement where the components of net income and the components of other comprehensive income are presented. In December 2011, the FASB deferred the effective date for amendments to the presentation of reclassifications of items out of accumulated other comprehensive income, while still requiring entities to adopt the other requirements. We are required to adopt this standard as of the beginning of 2013. We do not expect this adoption to have a material impact on our financial statements.

Liquidity and Capital Resources

We expect to continue to incur substantial development costs in our Biospherics segment in the next several years, without substantial corresponding revenue, and we will continue to incur ongoing administrative and other expenses, including public company expenses. We intend to finance our activities through:

- the remaining proceeds of our equity offerings; and
- additional funds we will seek to raise through the sale of additional stock in the future.

Working capital was $4.6 million at December 31, 2011, including $4.9 million cash on hand. Management believes that this cash on hand, combined with the $1.1 million of net proceeds of the February 2012 offering, provide us with sufficient cash to sustain operations for 2012. We expect that we will need to expend approximately $5 million over the next twelve (12) months to support our currently planned development operations. This estimate assumes (i) no further significant expenditures for developing D-tagatose as a drug for diabetes, (ii) continuing development of D-tagatose as a treatment for high triglycerides and other dyslipidemias, (iii) ongoing operation of the Health Sciences segment at the current level of activity and (iv) that we raise additional funds to continue our development efforts beyond this 12-month period.

Due to the nature of our business, we will need to raise additional funds on a consistent basis to continue operations, to fully pursue the triglycerides and other dyslipidemias opportunity, and to seek, investigate, pursue and exploit other pipeline development opportunities. Fundraising will likely require the issuance of additional equity securities and a purchaser of such securities will likely insist that such securities be registered securities. NASDAQ rules require stockholder approval for certain stock issuances constituting twenty percent (20%) or more of a company's issued and outstanding stock.

The Company has a Form S-3 shelf registration statement that is currently effective. However, it is unlikely that the Company will be able to use this shelf registration statement for another significant offering prior to its expiration on October 1, 2012. Following the expiration of this registration, the Company will need to obtain another registration statement to become effective.

The Company cannot be assured that it will be able to attract a purchaser of securities to raise the additional funds it will likely require; that the Company will be able to obtain any required stockholder approval; or that the Company will be able to have additional registered direct primary offerings. If we reach a point where we are unable to raise needed additional funds to continue our business activities, we will be forced to cease our development activities and dissolve the Company. In such an event, we will need to satisfy various severance, lease termination and other dissolution-related obligations.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Financial statements and supplementary data required by this Item 8 follow.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Spherix Incorporated

We have audited the accompanying consolidated balance sheets of Spherix Incorporated (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2011 and 2010, and the related consolidated statements of operations, changes in stockholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Spherix Incorporated and subsidiaries as of December 31, 2011 and 2010, and the results of their operations and their cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

/s/ Grant Thornton LLP

Baltimore, MD
March 29, 2012

Spherix Incorporated
Consolidated Statements of Operations
For the Years Ended December 31, 2011 and 2010

	2011	2010
Revenue	$ 820,925	$ 1,432,452
Operating expense		
Direct costs	(388,065)	(517,677)
Research and development expense	(1,645,939)	(4,846,111)
Selling, general and administrative expense	(3,133,792)	(4,080,123)
Total operating expense	(5,167,796)	(9,443,911)
Loss from operations	(4,346,871)	(8,011,459)
Interest income	3,455	6,109
Other income	51,261	135,914
Gain on settlement of obligations	845,000	—
Loss from continuing operations before taxes	(3,447,155)	(7,869,436)
Income tax (expense) benefit	(14,485)	133,194
Net loss	(3,461,640)	(7,736,242)
Net loss per share, basic	$ (1.32)	$ (4.28)
Net loss per share, diluted	$ (1.32)	$ (4.28)
Weighted average shares outstanding, basic	2,625,691	1,806,132
Weighted average shares outstanding, diluted	2,625,691	1,806,132

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

Spherix Incorporated
Consolidated Balance Sheets
As of December 31, 2011 and 2010

	2011	2010
ASSETS		
Current assets		
Cash and cash equivalents	$ 4,911,350	$ 5,575,310
Trade accounts receivable, net of allowance of $8,174 and $65,000	232,507	285,859
Grants receivable	—	270,128
Other receivables	53,851	74,110
Prepaid research expenses	209,780	464,322
Prepaid expenses and other assets	120,427	155,261
Total current assets	5,527,915	6,824,990
Property and equipment, net of accumulated depreciation of $265,502 and $197,971	91,482	154,161
Patents, net of accumulated amortization of $2,146 and $50,725	—	2,296
Deposit	35,625	35,625
Total assets	$ 5,655,022	$ 7,017,072
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable and accrued expenses	$ 269,996	$ 1,211,561
Accrued salaries and benefits	549,815	563,706
Deferred revenue	72,871	170,641
Total current liabilities	892,682	1,945,908

Deferred compensation	—	550,000
Deferred rent	47,675	80,945
Total liabilities	940,357	2,576,853
Commitments and contingencies	—	—
Stockholders' equity		
Preferred stock, $0.01 par value, 2,000,000 shares authorized; 5,250 series B issued and 1 outstanding at December 31, 2011, and December 31, 2010	—	—
Common stock, $0.01 par value, 50,000,000 shares authorized; 3,103,004 and 2,143,631 issued, 3,094,961 and 2,135,588 outstanding at December 31, 2011 and 2010, respectively	31,030	21,436
Paid-in capital in excess of par value	42,295,306	38,568,814
Treasury stock, 8,043 shares	(464,786)	(464,786)
Accumulated deficit	(37,146,885)	(33,685,245)
Total stockholders' equity	4,714,665	4,440,219
Total liabilities and stockholders' equity	$ 5,655,022	$ 7,017,072

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

Spherix Incorporated
Consolidated Statements of Changes in Stockholders' Equity
For the Years Ended December 2011 and 2010

	Preferred Stock		Common Stock		Paid-in Capital in	Treasury Stock			
	Shares	Amount	Shares	Amount	Excess of Par	Shares	Amount	Accumulated Deficit	Stockholders' Equity
Balance, January 1, 2010	—	$ —	1,723,109	$ 17,231	$ 33,668,434	8,043	$ (464,786)	$ (25,949,003)	$ 7,271,876
Sale of series B preferred stock, net of offering costs of $382,500	5,250	52	—	—	4,867,448	—	—	—	4,867,500
Conversion of series B preferred stock into common stock	(5,249)	(52)	419,920	4,199	(4,147)	—	—	—	—
Stock-based compensation	—	—	602	6	37,079	—	—	—	37,085
Net loss	—	—	—	—	—	—	—	(7,736,242)	(7,736,242)
Balance, December 31, 2010	1	—	2,143,631	21,436	38,568,814	8,043	(464,786)	(33,685,245)	4,440,219
Sale of common stock, net of offering costs of $333,800	—	—	959,373	9,594	3,690,958	—	—	—	3,700,552
Stock-based compensation	—	—	—	—	35,534	—	—	—	35,534
Net loss	—	—	—	—	—	—	—	(3,461,640)	(3,461,640)
Balance, December 31, 2011	1	$ —	3,103,004	$ 31,030	$ 42,295,306	8,043	$ (464,786)	$ (37,146,885)	$ 4,714,665

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

Spherix Incorporated
Consolidated Statements of Cash Flows
For the Years Ended December 31, 2011 and 2010

	2011	2010
Cash flows from operating activities		
Net loss	$ (3,461,640)	$ (7,736,242)
Adjustments to reconcile net loss to net cash used in operating activities:		
Gain on settlement of obligation	(845,000)	—
Depreciation and amortization	69,827	77,865
Provision for doubtful accounts	(5,351)	65,000
Stock-based compensation	35,534	37,085
Changes in assets and liabilities:		
Receivables	349,090	(419,996)
Prepaid expenses and other assets	289,376	(410,328)
Accounts payable and accrued expenses	(355,456)	(327,538)
Deferred rent	(33,270)	(28,767)
Deferred compensation	(305,000)	(30,000)
Deferred revenue	(97,770)	79,726

Net cash used in operating activities	(4,359,660)	(8,693,195)
Cash flows from investing activities		
Proceeds from the maturity of short-term investments	—	375,003
Purchase of fixed assets	(4,852)	—
Net cash (used in) provided by investing activities	(4,852)	375,003
Cash flows from financing activities		
Proceeds from issuance of Series B Preferred stock, net	—	4,867,500
Proceeds from issuance of common stock, net	3,700,552	—
Net cash provided by financing activities	3,700,552	4,867,500
Net decrease in cash and cash equivalents	(663,960)	(3,450,692)
Cash and cash equivalents, beginning of year	5,575,310	9,026,002
Cash and cash equivalents, end of year	$ 4,911,350	$ 5,575,310
Supplemental disclosures of cash flow information:		
Cash paid for taxes	$ 160,829	$ —

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

Spherix Incorporated
Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Nature of Business and Basis of Presentation

The Company's principal segments are Biospherics, our biotechnology research and development business, and Health Sciences, a technical and regulatory consulting business. The Health Sciences business provides technical and regulatory consulting services to biotechnology and pharmaceutical companies, as well as providing technical support for the Company's own R&D activities. The Company generally provides its services on either a fixed price basis or on a "time and expenses" basis, charging hourly rates for each staff member involved in a project, based on his or her skills and experience.

The Company has two wholly-owned subsidiaries, Biospherics Incorporated and Spherix Consulting, Inc., for its two operating segments. The Company's Health Sciences contracts are in the name of Spherix Consulting, Inc. and the Company's patents are in the name of Biospherics Incorporated. Spherix Incorporated provides management, strategic guidance, business development, marketing and other services to its subsidiaries.

The consolidated financial statements include the accounts of Spherix Incorporated, Biospherics Incorporated and Spherix Consulting, Inc. (collectively, the "Company"). All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates and Assumptions

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America. This requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the period. Significant estimates include allowance for doubtful accounts, stock compensation expense, amortization and depreciation. Accordingly, actual results could differ from those estimates and assumptions.

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less when purchased to be cash and cash equivalents. The Company maintains cash balances at several banks. Interest bearing accounts at each institution are insured by the Federal Deposit Insurance Corporation up to $250,000. At December 31, 2011, the Company's interest bearing deposits in excess of the FDIC limits was $4.7 million. The Company has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk on cash.

Concentrations

During 2011 and 2010, 100% and 99% of our revenue was generated from the Health Sciences business. In 2011, revenue from four customers accounted for 20%, 15%, 12% and 11% of revenues, respectively. In 2010, revenue from one customer accounted for 10% of revenues. At December 31, 2011, three major contracts constituted 71% of the trade accounts receivable, the components of which were 43%, 18% and 10%, respectively. At December 31, 2010, five major contracts constituted 69% of the trade accounts receivable, the components of which were 19%, 16%, 12%, 11% and 11%, respectively. No other single contract was greater than 10% of total trade accounts receivable.

Property and Equipment and Depreciation

Property and equipment are stated at cost and consist of office furniture and equipment, computer hardware and software, and leasehold improvements. The Company computes depreciation and amortization under the straight-line method and typically over the following estimated useful lives of the related assets:

Office furniture and equipment	3 to 10 years
Computer hardware and software	3 to 5 years

Leasehold improvements are depreciated or amortized over the shorter of the term of the related lease or the estimated useful lives of the assets (generally 5 to 10 years). Major additions, improvements and renewals are capitalized at cost and ordinary repairs, maintenance, and renewals are expensed in the year incurred. Gains or losses

from the sale or retirement of property and equipment result from the difference between sales proceeds (if any) and the assets' net book value, and are recorded in the consolidated Statements of Operations.

Patent Costs

Legal costs incurred in connection with patent applications and costs of acquiring patents are capitalized when incurred. When patents are granted, costs are amortized over a term representing the shorter of the life of the patent or the projected sales period of the product or process.

Impairment of Long-Lived Assets

Whenever events or changes in circumstances indicate that the carrying amount of long-lived assets, including patents and property and equipment, may not be fully recoverable, the Company evaluates the probability that the future undiscounted net cash flows, without interest charges, will be less than the carrying amount of the assets. If any impairment is indicated as a result of this review, the Company would recognize a loss based on the amount by which the carrying amount exceeds the estimated fair value, determined based on the discounted future cash flows. In 2011 and 2010, no such impairment was noted.

Treasury Stock

The Company accounts for the treasury stock using the cost method, which treats it as a temporary reduction in stockholders' equity.

Common Stock Purchase Warrants

The Company accounts for the issuance of Common Stock purchase warrants issued in connection with the equity offerings in accordance with the provisions of ASC 815, Derivatives and Hedging ("ASC 815"). The Company classifies as equity any contracts that (i) require physical settlement or net-share settlement or (ii) gives the Company a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). The Company classifies as assets or liabilities any contracts that (i) require net-cash settlement (including a requirement to net-cash settle the contract if an event occurs and if that event is outside the control of the Company) or (ii) gives the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement).

The Company assessed the classification of its Common Stock purchase warrants as of the date of each registered direct offering and through December 31, 2011 and determined that such derivatives met the criteria for equity classification.

Preferred Stock

Preferred shares subject to mandatory redemption (if any) are classified as liability instruments and are measured at fair value. Accordingly the Company classifies conditionally redeemable preferred shares (if any), which includes preferred shares that feature redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company's control, as temporary equity. At all other times, the Company classifies its preferred shares as a component of stockholders' equity.

The Company's Series B Convertible Preferred Stock does not feature any redemption rights within the holders' control or conditional redemption features not solely within the Company's control as of December 31, 2011. Accordingly, the Series B Convertible Preferred Stock is presented as a component of stockholders' equity.

Revenue Recognition

Revenue is recognized when persuasive evidence of an arrangement exists, services have been rendered, the contract price is fixed or determinable and collectability is reasonably assured. On time and expense contracts revenue is recognized at contractually agreed-upon rates based upon direct labor hours expended and other direct costs incurred.

Revenue for fixed-price contracts is recognized under the proportional performance method based upon labor charged in relation to total expected labor charges. Losses, if any, on contracts are recorded during the period when first determined.

Direct Costs

The Company's direct costs consist primarily of labor costs.

Research and Development Costs

Research and development costs are charged to operations as incurred.

Selling, General and Administrative Expense

The Company's selling, general and administrative expenses consist primarily of executive management salaries and fringe benefits, sales and marketing costs, finance and accounting, human resources, as well as general corporate costs and costs related to being a public company.

Other Income

Other income consists of two grants from the U.S. Government awarded in October 2010 in support of the Company's 2009 and 2010 diabetes and triglyceride research. As a result, in 2011 and 2010 the Company recognized $39,000 and $136,000 in other income, net of a related tax expense of $14,000 and tax benefit of $133,000, respectively.

Income Taxes

Deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each year end, based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. A valuation allowance is established based upon periodic assessments made by management to reduce deferred tax assets to the amount expected to be realized. Income tax expense is the current tax provision for the period and the change during the period in deferred tax assets and liabilities.

During 2010, the Company's subsidiary, Biospherics Incorporated, received notice from the IRS that it had been awarded two grants under IRC Section 48D of the Internal Revenue Code's "Qualifying Therapeutic Discovery Project ("QTDP"). The amount received pursuant to the QTDP Grant was $270,000 of which $133,000 related to the income tax benefit associated with the realization or "monetization" of prior-period tax attributes for which the Company had previously established a valuation allowance.

The Company's policy is to recognize interest and penalties on tax liabilities as interest expense. At December 31, 2011 and 2010, the Company had no unrecognized income tax benefits and recognized no interest or penalties on income tax liabilities.

Fair Value Information

The estimated fair value of the Company's financial instruments, which include cash, receivables, and accounts payable reported in the Consolidated Balance Sheets, approximate their carrying value given their short maturities.

The Company groups financial assets and financial liabilities measured at fair value in three levels, based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value. These levels are:

Level 1 Valuations for assets and liabilities traded in active exchange markets. Valuations are obtained from available pricing sources for market transactions involving identical assets or liabilities.

Level 2 Valuations for assets and liabilities traded in less active dealer or broker markets. Valuations are

obtained from third party pricing services for identical or comparable assets or liabilities which use observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in active markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

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

At December 31, 2011 and 2010, the Company had approximately $4.3 million and $5.3 million in money market accounts, respectively, which are Level 1 fair value instruments.

Accounting for Stock-Based Compensation

The Company applies the fair value method, which requires that the measurement of all employee share-based payments to employees, including grants of employee stock options, be expensed over their requisite service period based on their value at the grant date using their fair value, determined using a prescribed option-pricing model. The Company uses a Black-Scholes option pricing model to value stock options. For the years ended December 31, 2011 and 2010, the Company recognized $36,000 and $30,000 in stock based compensation expense relating to 45,000 stock options awarded in November 2011,

26,664 stock options awarded in April 2010 and 59,000 stock options awarded in February 2006, and also recognized $7,000 in 2010 related to the issuance of restricted stock (see Note 7, "Stockholders' Equity").

Net Loss Per Share

Basic net loss per common share has been computed by dividing net loss by the weighted-average number of common shares outstanding during the year. Diluted net loss per common share has been computed by dividing net loss by the weighted-average number of common shares outstanding without an assumed increase in common shares outstanding for common stock equivalents, as common stock equivalents are antidilutive. At December 31, 2011, 5,850 of the Company's 48,509 outstanding options and 548,536 of the Company's 1,107,828 warrants were considered common stock equivalents as the exercise prices of those options and warrants were above the average market price of the Company's common stock for the period.

New Accounting Pronouncements

In May 2011, the FASB issued a new accounting standard on fair value measurements that clarifies the application of existing guidance and disclosure requirements, changes certain fair value measurement principles and requires additional disclosures about fair value measurements. We are required to adopt this standard in the first quarter of 2012. We do not expect this adoption to have a material impact on our financial statements.

In June 2011, the FASB issued a new accounting standard on the presentation of comprehensive income. The new standard requires the presentation of comprehensive income, the components of net income and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. The new standard also requires presentation of adjustments for items that are reclassified from other comprehensive income to net income in the statement where the components of net income and the components of other comprehensive income are presented. In December 2011, the FASB deferred the effective date for amendments to the presentation of reclassifications of items out of accumulated other comprehensive income, while still requiring entities to adopt the other requirements. We are required to adopt this standard as of the beginning of 2013. We do not expect this adoption to have a material impact on our financial statements.

2. Liquidity

We expect to continue to incur substantial development costs in our Biospherics segment in the next several years, without substantial corresponding revenue, and we will continue to incur ongoing administrative and other expenses, including public company expenses. We intend to finance our activities through:

- the remaining proceeds of our equity offerings; and
- additional funds we will seek to raise through the sale of additional stock in the future.

Working capital was $4.6 million at December 31, 2011, including $4.9 million cash on hand. Management believes that this cash on hand, combined with the $1.1 million of net proceeds of the February 2012 offering (described in Note 13), provide us with sufficient cash to sustain operations for 2012. We expect that we will need to expend approximately $5 million over the next twelve (12) months to support our currently planned development operations. This estimate assumes (i) no further significant expenditures for developing D-tagatose as a drug for diabetes, (ii) continuing development of D-tagatose as a treatment for high triglycerides and other dyslipidemias, (iii) ongoing operation of the Health Sciences segment at the current level of activity and (iv) that we raise additional funds to continue our development efforts beyond this 12-month period.

Due to the nature of our business, we will need to raise additional funds on a consistent basis to continue operations and to fully pursue the triglycerides and other dyslipidemias opportunity. Fundraising will likely require the issuance of additional equity securities and a purchaser of such securities will likely insist that such securities be registered securities. NASDAQ rules require stockholder approval for certain stock issuances constituting twenty percent (20%) or more of a company's issued and outstanding stock.

The Company cannot be assured that it will be able to attract a purchaser of securities to raise the additional funds it will likely require; that the Company will be able to obtain any required stockholder approval; or that the Company will be able to have additional registered direct primary offerings. If we reach a point where we are unable to raise needed additional funds to continue our business activities, we will be forced to cease our development activities and dissolve the Company. In such an event, we will need to satisfy various severance, lease termination and other dissolution-related obligations.

3. Accounts Receivable

The Company's accounts receivable includes amounts owed by customers for consulting related activities under contracts signed with those customers. Credit is extended to customers based on an evaluation of a customer's financial condition and, in general, collateral is not required. Management regularly reviews accounts receivable for uncollectible and potentially uncollectible accounts, and when necessary establishes an allowance for doubtful accounts. Balances that are outstanding after management has used reasonable collection efforts are written-off through a charge to the allowance for doubtful accounts and a credit to accounts receivable. At December 31, 2011 and 2010, the allowance for doubtful accounts was $8,000 and $65,000 respectively.

Balance, January 1, 2010	$ 0
Provision for doubtful accounts	65,000
Balance December 31, 2010	65,000
Amounts written-off	(52,000)
Reduction in the provision for doubtful accounts	(5,000)
Balance December 31, 2011	$ 8,000

4. Property and Equipment

The components of property and equipment as of December 31, at cost are:

	2011	2010
Computers	$ 19,000	$ 14,000
Office furniture and equipment	109,000	109,000
Leasehold improvements	229,000	229,000
Total cost	357,000	352,000
Accumulated depreciation and amortization	(266,000)	(198,000)
Property and equipment, net	$ 91,000	$ 154,000

The Company's depreciation expense for the years ended December 31, 2011 and 2010 was $68,000 and $72,000, respectively.

5. Patents and Intangible Assets

The Company's amortization expense for the years ended December 31, 2011 and 2010 was $2,000 and $6,000 on patents with an original value of $53,000, of which $51,000 expired in 2011.

6. Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses consisted of the following at December 31:

	2011	2010
Accounts payable	$ 106,000	$ 312,000
Purchase commitment	—	600,000
Deferred Compensation	—	145,000
Accrued expenses	164,000	154,000
	$ 270,000	$ 1,211,000

7. Stockholders' Equity

Equity Offerings

In October 2011, the Company entered into a securities purchase agreement with certain investors to sell an aggregate of 532,559 shares of its common stock and warrants to purchase up to an additional 532,559 shares of its common stock to such investors for gross proceeds of approximately $1.25 million. The common stock and warrants were sold in units, with each unit consisting of one share of common stock and a warrant to purchase one share of common stock. The purchase price per unit was $2.37. Subject to certain ownership limitations, the warrants are exercisable for a five-year period at an exercise price of $2.24 per share. The exercise price of the warrants is subject to adjustment in the case of stock splits, stock dividends, combinations of shares and similar recapitalization transactions. The net proceeds to the Company from the offering, after deducting placement agent fees and the Company's offering

expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, were approximately $1.1 million. The common stock issued in the October 2011 offering and the common stock that may be issued pursuant to the exercise of the warrants were registered with the Securities and Exchange Commission pursuant to a registration statement on Form S-3 (File No. 333-177748), which became effective on November 21, 2011, and are classified as permanent equity.

In connection with the closing of the October 2011 offering, the Company issued to Rodman & Renshaw, LLC warrants with a term of two years to purchase 15,977 shares of our common stock (at an exercise price of $2.95 per share). The estimated fair value of the warrants at the date of grant was $25,000. These warrants were offered and sold by us in reliance upon exemptions from the registration statement requirements by Section 4(2) of the Securities Act of 1933, as amended, as transactions by an issuer not involving a public offering.

On January 19, 2011, the Company entered into a securities purchase agreement with certain investors to sell an aggregate of 426,900 shares of its common stock and warrants to purchase up to an additional 213,450 shares of its common stock to such investors for gross proceeds of approximately $2.77 million. The common stock and warrants were sold in units, with each unit consisting of one share of common stock and a warrant to purchase 0.50 of a share of common stock. The purchase price per unit was $6.50. Subject to certain ownership limitations, the warrants are exercisable for a five-year period at an exercise price of $8.00. The exercise price of the warrants is subject to adjustment in the case of stock splits, stock dividends, combinations of shares and

similar recapitalization transactions. The net proceeds to the Company from the registered direct offering, after deducting placement agent fees and the Company's offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, were approximately $2.6 million. The common stock issued in the January 2011 offering and the common stock that may be issued pursuant to the exercise of the warrants have been registered pursuant to a Form S-3 registration statement (File No. 333-161531), which became effective on October 1, 2009, and are classified as permanent equity.

In connection with the closing of our January 2011 offering, the Company issued to Rodman & Renshaw, LLC, as partial consideration for its services as placement agent, warrants with a term of two years to purchase up to 12,807 shares of our common stock at an exercise price of $8.13 per share. The estimated fair value of the warrants at the date of grant was $42,000. These warrants were offered and sold by us in reliance upon exemptions from the registration statement requirements by Section 4(2) of the Securities Act of 1933, as amended, as transactions by an issuer not involving a public offering.

On October 7, 2010, the Company and certain investors entered into a securities purchase agreement, pursuant to which the Company agreed to sell an aggregate of 5,250 shares of its Series B Convertible Preferred Stock and warrants to purchase up to an additional 210,000 shares of its common stock to such investors for gross proceeds of approximately $5.25 million. Each share of Series B Convertible Preferred Stock was convertible at the option of the holder, at any time, into 80 shares of common stock based on a conversion price of $12.50 per share of Series B Convertible Preferred Stock. The preferred stock and warrants were sold in units, with each unit consisting of one share of preferred stock and a warrant to purchase 0.5 of a share of common stock. The purchase price per unit was $1,000.00. Subject to certain ownership limitations, the warrants are exercisable for a five-year period at an exercise price of $15.00 per share. The exercise price of the warrants is subject to adjustment in the case of stock splits, stock dividends, combinations of share and similar recapitalization transactions. The net proceeds to the Company from the October 2010 offering, after deducting placement agent fees and the Company's offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, were approximately $4.9 million. The preferred stock, warrants to purchase common stock (including the placement agent warrants) and shares of common stock issuable upon conversion of the preferred stock and exercise of the warrants were issued pursuant to a prospectus filed with the Securities and Exchange Commission pursuant to a registration statement on Form S-1 (File No. 333-167963), which became effective on October 6, 2010, and are classified as permanent equity.

In connection with the closing of the October 2010 offering, the Company issued to Rodman & Renshaw, LLC warrants with a term of two years to purchase 12,600 shares of our common stock (at an exercise price of $15.63 per share). The estimated fair value of the warrants at the date of grant was $49,000. These warrants were offered and sold by us in reliance upon exemptions from the registration statement requirements by Section 4(2) of the Securities Act of 1933, as amended, as transactions by an issuer not involving a public offering.

Restricted Stock

In August 2010, the Company issued 602 shares of restricted stock as part of an employment agreement. The total fair value of the issuances of the stock was $10,000, which was recognized as compensation expense over a one-year vesting period. The fair value of the stock awards was based on the closing market price on the date of the grant.

Stock Option Plan

The Company has an Employees' Stock Option Plan (the "Plan") which permits issuance of both Incentive Stock Options (ISO) and Non-Qualified Stock Options, whereby options may be granted to officers, Directors and other key employees to purchase up to 100,000 shares of common stock in amounts determined by the Compensation Committee of the Board of Directors through December 31, 2015. During 2011 and 2010, the Company granted 45,000 and 35,088 stock options to the Company's Board of Directors and officers under the Plan. Options issued to employees typically vest over a four-year period and options issued to non-employee directors vested immediately upon being granted. At December 31, 2011, there were 20,000 options under the plan that were fully vested. The total unrecognized stock compensation expense at December 31, 2011 is approximately $43,000, which will be recognized over 3.9 years.

The Company used the following assumptions in the Black-Scholes calculation used to measure the fair value of stock-based compensation in accordance with ASC 718 for stock options granted in 2011 and 2010.

	2011	2010
Risk-free interest rate	0.93%	2.01%
Dividend yield	0%	0%
Expected life (years)	5	4
Volatility	130.0%	106.1%

Activity for the two years ended December 31, 2011, for all option grants is shown below:

	2011				2010	
	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value	Shares	Weighted Average Exercise Price
Outstanding at beginning of year	6,309	$ 16.10			4,050	$ 25.70
Granted	45,000	$ 2.00			3,509	$ 11.40
Exercised	—	$ —			—	$ —
Expired or forfeited	(2,800)	$ 22.00			(1,250)	$ 34.10
Outstanding at end of year	48,509	$ 2.68	4.8	$ —	6,309	$ 16.10
Options exercisable at end of year	23,509		4.7	$ —	6,309	
Weighted-average fair value	$ 1.71				$ 8.20	

of options granted during the year		
Price range of options		
Outstanding	$2.00-$11.40	$11.40-$22.00
Exercised	$ —	$ —
Expired or forfeited	$ 22.00	$ 34.10

The following table summarizes information with respect to stock options outstanding at December 31, 2011:

	Options Outstanding			Options Exercisable	
Range of Exercise Price	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Number of Options	Weighted Average Exercise Price
$ 2.00	45,000	$ 2.00	4.9	20,000	$ 2.00
$ 11.40	3,509	$ 11.40	3.7	3,509	$ 11.40
	48,509			23,509	

8. Gain on Settlement of Obligations

On January 14, 2011, Biospherics Incorporated, a wholly-owned subsidiary of the Company, filed a Complaint For Injunction Relief And Damages in The United States District Court For The District Of Maryland against Inalco S.p.A. (the "Complaint"). The Complaint alleged that Inalco had breached the 2009 Manufacturing Support and Supply Agreement as Inalco (i) refused to supply D-tagatose previously paid for by Biospherics, (ii) refused to provide a promised bank guarantee, and (iii) shut-down its D-tagatose production facilities. On March 16, 2011, both parties signed a settlement agreement whereby Inalco agreed to supply Spherix with 8.5 metric tons of D-tagatose, which has been received by Spherix, and both parties have agreed to release each other from any other obligations under the previous agreement. As a result, the Company recognized a gain of $600,000 in March 2011 on the release from its purchase obligation.

In January 2011, the Company entered into a Letter Agreement with Gilbert V. Levin and M. Karen Levin pursuant to which the Company agreed to make a one time lump sum payment of $450,000 to the Levins in full satisfaction of the Company's obligation to make a series of continuing payments to the Levins relating to their prior employment by the Company. Per the terms of the agreement, Gilbert V. Levin resigned as a member of the Board of Directors of the Company on January 13, 2011. The Company's estimated liability to the Levins at December 31, 2010, and prior to the above agreement was approximately $695,000. The $450,000 lump sum payment was made on January 31, 2011, and the Company recognized the $245,000 difference as a gain on settlement of obligations in January 2011.

9. Income Taxes

Income tax from operations for 2011 and 2010 was as follows:

	2011	2010
U.S. Federal income tax (expense) benefit	$ (13,000)	$ 118,000
State and local income tax (expense) benefit	$ (1,000)	$ 15,000
Total income tax (expense) benefit	$ (14,000)	$ 133,000

	2011	2010
Current income tax (expense) benefit	$ (14,000)	$ 38,000
Deferred income tax (expense) benefit	$ —	$ 95,000
Total income tax (expense) benefit	$ (14,000)	$ 133,000

The tax effects of significant temporary differences representing deferred tax assets as of December 31, 2011 and 2010 are as follows:

	2011	2010
Deferred tax assets		
Deferred rent	$ 19,000	$ 32,000
Accrued vacation	39,000	33,000
Tax credit/grants	82,000	23,000
Deferred compensation	—	274,000

Net operating loss carryforward	15,922,000	13,912,000
Accrued bonus	154,000	165,000
Stock based compensation	25,000	41,000
Inventory adjustments	—	426,000
Accrued expenses	38,000	38,000
Other	5,000	27,000
Total deferred tax asset	16,284,000	14,971,000
Deferred tax liabilities		
Property and equipment	(4,000)	(23,000)
Change in accounting method - accrued bonus	(20,000)	(41,000)
	(24,000)	(64,000)
Valuation allowance	(16,260,000)	(14,907,000)
Net Deferred tax asset	$ —	$ —

At December 31, 2011 and 2010, the Company had gross operating loss carryforwards for U.S. federal income tax purposes of approximately $39.0 million and $33.9 million, respectively, which will begin to expire in 2019. At December 31, 2011 and 2010, the Company had gross operating loss carryforwards for state income tax purposes of approximately $49.9 million and $44.6 million, respectively, which will begin to expire in 2018. Based on the Company's historical losses and its accumulated deficit, the Company has provided a full valuation allowance against the net deferred tax asset.

Utilization of the net operating loss carryforwards and credit could be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. The Company has not performed a detailed analysis to determine whether an ownership change under Section 382 of the Internal Revenue Code occurred. The effect of an ownership change would be the imposition of an annual limitation on the use of net operating loss carryforwards attributable to periods before the change and could result in a reduction in the total net operating losses and research credits available.

Reconciliation between actual tax benefits and taxes computed at the statutory Federal rate of 34 percent for 2011 and 2010 are as follows:

	2011	2010
U.S. Federal income tax benefit at the statutory rate of 34%	$ 1,172,000	$ 2,675,000
Effect of permanent differences	(10,000)	(7,000)
Effect of permanent differences - Government Grant	4,000	51,000
State income taxes benefit, net of federal tax benefit	251,000	424,000
Other	(79,000)	—
Change in valuation allowance	(1,352,000)	(3,010,000)
Income tax (expense) benefit	$ (14,000)	$ 133,000

During 2010, the Company's subsidiary, Biospherics Incorporated, received notice from the IRS that it had been awarded two grants under IRC Section 48D of the Internal Revenue Code's "Qualifying Therapeutic Discovery Project." The amount received pursuant to the QTDP Grant was $0.3 million of which $0.1 million related to the

income tax benefit associated with the realization or "monetization" of prior-period tax attributes for which the Company had previously established a valuation allowance.

Tax Uncertainties

The Company recognizes a tax benefit associated with an uncertain tax position when, in management's judgment, it is more likely than not that the position will be sustained upon examination by a taxing authority. For a tax position that meets the more-likely-than-not recognition threshold, the Company initially and subsequently measures the tax benefit as the largest amount that it judges to have a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority. The liability associated with unrecognized tax benefits is adjusted periodically due to changing circumstances, such as the progress of tax audits, case law developments and new or emerging legislation. The effective tax rate includes the net impact of changes in the liability for unrecognized tax benefits and subsequent adjustments as considered appropriate by management. The Company has not recognized any such adjustments. At December 31, 2011 and 2010, the Company had no material unrecognized income tax benefits and recognized no interest or penalties on income tax liabilities.

The Company is subject to U.S. federal income tax and state and local income tax in multiple jurisdictions. The statute of limitations for the consolidated U.S. federal income tax return is closed for all tax years up to and including 2007, except for pre-2007 tax returns that generated net operating loss carry forwards that could be adjusted on audit. Currently, no federal or state and local income tax returns are under examination by the respective taxing authorities.

10. Commitments and Contingencies

Purchase Commitments

During 2009, the Company entered into a purchase commitment with a supplier of the Company's D-tagatose product. The agreement committed the Company to purchase 25 metric tons of D-Tagatose. The Company utilized the D-tagatose as a part of the Phase 2 and Phase 3 trials. This phase was necessary for the Company to be able to commercialize the product and as the products were not going to be available for sale, the Company wrote off the entire product value into Research and Development Costs. The amounts written off in 2009 from the agreement were $1.1 million. Of this amount $500,000 was paid in 2009 and the remaining balance of $600,000 was included in the Company's accounts payable and accrued expenses at December 31, 2010. On March 16, 2011, both parties signed an agreement whereby Inalco agreed to supply Spherix with 8.5 metric tons of D-tagatose for amounts previously paid for and both parties agreed to release each other from any other obligations under the previous agreement. As a result, Spherix recognized a gain of $600,000 in 2011 on the release from its purchase obligation.

Leases

The Company has commitments under an operating lease through 2013 relating to its administrative office in Bethesda, Maryland.

Future minimum rental payments required as of December 31, 2011, under the non-cancelable lease are as follows:

Year Ending December 31,	Operating Lease
2012	159,000
2013	40,000
	$ 199,000

The Company's building lease contains step rent provisions, capital improvement funding, or other tenant allowances. Minimum rental payments including allowances on this lease are recognized on a straight-line basis over the term of the lease. In 2008, lease incentives under the Bethesda facility lease provided for $150,000 of leasehold

improvements. The Company incurred net operating lease rental expenses of approximately $129,000 and $140,000 for the years 2011 and 2010, respectively.

Related Party Transactions

Employment, Deferred Compensation, and Consulting Agreements for Principal Stockholders

Under employment agreements with Dr. Gilbert V. Levin and Mrs. M. Karen Levin, the Company's founders, the Company agreed to provide Dr. and Mrs. Levin each with lifetime payments of $12,500 each quarter and to fund long-term lifetime healthcare and health insurance policies following their retirements from the Company on August 14, 2008 and January 4, 2006, respectively. At December 31, 2010, the Company's liability for both Dr. and Mrs. Levin was estimated to be $450,000 for the lifetime payments and $245,000 for funding the long-term lifetime healthcare and health insurance policies based on actuarially determined amounts. The non-current portion of these amounts was reported on the accompanying balance sheet as deferred compensation at December 31, 2010. During 2011 and 2010, the Company paid Dr. and Mrs. Levin a combined total of $24,000 and $141,000 in post-retirement benefits under the above agreements.

In January 2011, the Company entered into a Letter Agreement with Gilbert V. Levin and M. Karen Levin pursuant to which the Company agreed to make a one time lump sum payment of $450,000 to the Levins in full satisfaction of the Company's obligation to make a series of continuing payments to the Levins relating to their prior employment by the Company. The Company's estimated liability to the Levins at December 31, 2010, and prior to the above agreement, was approximately $695,000. The $450,000 lump sum payment was made on January 31, 2011, and the Company recognized a gain of $245,000 in 2011. Per the terms of the agreement, Gilbert V. Levin resigned as a member of the Board of Directors of the Company on January 13, 2011.

11. Employee Benefit Plans

The Spherix Incorporated 401(k) Retirement Plan (the "Plan") is a discretionary defined contribution plan and covers substantially all employees who have attained the age of 21, have completed one year of service, and have worked a minimum of 1,000 hours in the past Plan or anniversary year.

Under provisions of the Plan, the Company, for any plan year, has contributed an amount equal to 50% of the participant's contribution or 2½% of the participant's eligible compensation, whichever is less. The Company may, at its own discretion, make additional matching contributions to participants. Company contributions, net of forfeitures, amounted to $18,000 in each of 2011 and 2010, respectively.

12. Information by Business Segment

Operating segments are components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company's principal segments are Biospherics, our biotechnology research and development business, and Health Sciences, a technical and regulatory consulting business.

Financial information by business segment for the years ended December 31, 2011 and 2010 is summarized below:

		Year Ended December 31, 2011	Year Ended December 31, 2010
Revenues	Health Sciences	$ 821,000	$ 1,417,000
	Biospherics	—	15,000
	Total revenues	$ 821,000	$ 1,432,000
Operating Income (Loss) and Loss Before Income Taxes	Health Sciences	$ 156,000	$ 464,000
	Biospherics	(1,817,000)	(5,659,000)
	General and administration	(2,686,000)	(2,816,000)
	Total operating loss	(4,347,000)	(8,011,000)
	Interest income	3,000	6,000
	Other income	51,000	136,000
	Gain on settlement of obligations	845,000	—
	Loss from continuing operations before income taxes	$ (3,448,000)	$ (7,869,000)
Income Tax (Expense) Benefit	Health Sciences	$ —	$ —
	Biospherics	(14,000)	133,000
	Total income tax benefit	$ (14,000)	$ 133,000
Identifiable Assets	Health Sciences	$ 193,000	$ 359,000
	Biospherics	287,000	739,000
	General corporate assets	5,175,000	5,919,000
	Total assets	$ 5,655,000	$ 7,017,000
Capital Expenditures	Health Sciences	$ —	$ —
	Biospherics	—	—
	General corporate assets	5,000	—
	Total capital expenditures	$ 5,000	$ —
Depreciation and Amortization	Health Sciences	$ —	$ —
	Biospherics	2,000	6,000
	General corporate assets	68,000	72,000
	Total depreciation and amortization	$ 70,000	$ 78,000

Operating income (loss) from continuing operations consists of revenue less operating expenses. In computing operating loss, interest expense and income taxes were not considered. The operating income for the Health Sciences segment was 19% and 33% of that segment's revenue for 2011 and 2010.

Biospherics is dedicated to development of pharmaceuticals. Until June 2010, this development was limited to developing D-tagatose as a novel, first-in-class treatment for Type 2 diabetes. In June 2010, the Company announced that it will seek a pharma partner to continue the diabetes development and that it will also explore D-tagatose as a potential treatment for high triglycerides and other dyslipidemias, a risk factor for atherosclerosis, myocardial infarction, and stroke.

Identifiable assets by business segment are those assets used in the Company's operations in each segment, such as accounts receivable, inventories, fixed assets, and patent costs. Corporate assets are principally cash and certain other assets not related to a particular segment's operations.

13. Subsequent Events

The Company evaluated all events or transactions after December 31, 2011 through the date the financial statements were issued.

On February 2, 2012, the Company entered into a securities purchase agreement with certain investors to sell an aggregate of 1,064,815 shares of its common stock and warrants to purchase up to an additional 212,963 shares of its common stock to such investors for gross proceeds of approximately $1.15 million. The common stock and warrants were sold in units, with each unit consisting of one share of common stock and a warrant to purchase 0.2 of a share of common stock. The purchase price per unit was $1.08. Subject to certain ownership limitations, the warrants are exercisable at any time commencing six (6) months after the initial issue date and on or prior to August 7, 2017, but not thereafter, at an exercise price of $1.40. The exercise price of the warrants is subject to adjustment in the case of stock splits, stock dividends, combinations of shares and similar recapitalization transactions. The net proceeds to the Company from the registered direct offering, after deducting placement agent fees and the Company's offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, were approximately $1.1 million. The common stock issued in the February 2012 offering and the

common stock that may be issued pursuant to the exercise of the warrants have been registered pursuant to a Form S-3 registration statement (File No. 333-161531), which became effective on October 1, 2009, and are classified as permanent equity.

In connection with the closing of our February 2012 offering, the Company issued to Rodman & Renshaw, LLC, as partial consideration for its services as placement agent, warrants to purchase up to 31,944 shares of our common stock at an exercise price of $1.35 per share. The estimated fair value of the warrants at the date of grant was $19,000. The warrants are exercisable at the option of the holder at any time beginning six (6) months after the closing through and including February 6, 2014. These warrants were offered and sold by us in reliance upon exemptions from the registration statement requirements by Section 4(2) of the Securities Act of 1933, as amended, as transactions by an issuer not involving a public offering.

In March 2012, the Company entered into an amendment to its office building lease, which extends the term of the lease five years. The lease as amended will expire on March 31, 2018. Commencing on April 1, 2012, the base annual rent shall be $152,500, with an increase of 3% annually.

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

None.

Item 9A. CONTROLS AND PROCEDURES

Inherent Limitations on the Effectiveness of Controls

Management, including our Chief Executive Officer and Chief Financial Officer, do not expect that our disclosure controls and procedures will prevent all errors and fraud. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives. Further, the design of a control system must reflect the fact that there are resource constraints, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management's override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports, such as this report on Form 10-K, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. These controls and procedures are based closely on the definition of "disclosure controls and procedures" in Rule 13a-15(e) promulgated under the Exchange Act. Rules adopted by the SEC require that we present the conclusions of the Chief Executive Officer and Chief Financial Officer about the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report.

The Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures to provide reasonable assurance of achieving their objective pursuant to Exchange Act Rule 13a-14. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures are effective at a reasonable assurance level, as of December 31, 2011. This report does not include an attestation of our independent registered public accounting firm regarding internal control over financial reporting. Management's report is not subject to attestation by our independent registered public accounting firm pursuant to the rules of the SEC for smaller reporting companies.

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 such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework set forth in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on our evaluation, management has concluded that its internal control over financial reporting was effective as of December 31, 2011.

This Annual Report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this Annual Report on the Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes in the Company's internal control over financial reporting during the period covered by this report that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth the Spherix Board of Directors.

Name	Age	Position	Director Since
Douglas T. Brown	58	Director	2004
Claire L. Kruger	53	Director, and Chief Executive Officer	2007
Robert A. Lodder, Jr.	52	Director, and President	2005
Aris Melissaratos	68	Director	2008
Thomas B. Peter	58	Director	2009
Robert J. Vander Zanden	66	Director, and Chairman of the Board	2004

Mr. Douglas T. Brown, a Board Member since 2004, is Senior Vice President and Manager of the Corporate Banking Government Contracting Group for PNC Bank N.A., Washington, DC. Mr. Brown has been with PNC and its predecessor bank, Riggs Bank, since 2001 and previously worked for Bank of America, N.A. and its predecessor banks for 16 years as a Loan Officer, as well as a manager of Loan Officers in the Mid-Atlantic region. Subsequent to 1990, the majority of Mr. Brown's customers are companies that provided services to the Federal Government and State governments. Mr. Brown holds a B.A. degree in Political Science from American University and a graduate degree from The Stonier Graduate School of Banking at the University of Delaware. He is not now, nor has he been for the past five years, a director of a public, for-profit company other than Spherix.

Dr. Claire L. Kruger was elected to the Spherix Incorporated Board of Directors in August 2007, and was also elected Chief Executive Officer and Director of Health Sciences at that time. Dr. Kruger received her Ph.D. in Toxicology from Albany Medical College, and her B.S. in Biology from Clarkson College. With more than 20 years of consulting experience, her primary areas of expertise are in foods, consumer products and pharmaceuticals, where she provides scientific, regulatory, and strategic support to clients in both the US and international regulatory arenas. Dr. Kruger has conducted toxicity evaluations of foods and food contaminants, as well as health risk assessments and exposure assessments of drugs, cosmetics, and pesticides. Her clients include food, drug, and dietary supplement manufacturers, agricultural producers, biotechnology companies, trade associations, and law firms. In her role as a consultant, Dr. Kruger has been involved in the safety evaluation of a variety of consumer products, providing oversight of product compliance with current and emerging scientific and regulatory guidance. She is not now, nor has she been for the past five years, a director of a public, for-profit company other than Spherix.

Dr. Robert A. Lodder, Spherix Incorporated Board Member since 2005, was elected President in August 2007. He served as a Professor of Pharmaceutical Sciences at the College of Pharmacy, University of Kentucky Medical Center, and holds joint appointments in the Department of Electrical and Computer Engineering and the Division of Analytical Chemistry of the Department of Chemistry at Kentucky. Dr. Lodder received his B.S. degree cum laude in Natural Science in 1981, and his M.S. in Chemistry in 1983 from Xavier University, Cincinnati, Ohio. He received his Ph.D. in Analytical Chemistry in 1988 from Indiana University. He was a founder of InfraReDx, Inc. in 1998 and Prescient Medical, Inc. in 2004. Neither of these companies are public, and they do not engage in business with Spherix. He is not now, nor has he been for the past five years, a director of a public, for-profit company other than Spherix.

Mr. Aris Melissaratos was elected to the Spherix Board of Directors in February 2008. He currently serves as Senior Advisor to the President of The Johns Hopkins University with responsibilities for technology transfer, corporate partnerships, and enterprise development. From 2003 to 2007, he served as Secretary of Business and Economic Development for the State of Maryland, driving the state's unemployment figures to an impressive 3.6% and positioning Maryland for leadership in the emerging "knowledge economy." He worked for Westinghouse Electric Corporation for 32 years, culminating as the corporation's Chief Technology Officer and Vice President for Science and Technology, responsible for running Westinghouse's research and development functions. He also served as the Chief Operations Officer for the company's Defense Electronics Group, where he was responsible for managing 16,000 employees (9,000 engineers) and $3.2 billion dollars of sales. After Westinghouse, he became Vice President of Thermo Electron Corporation and CEO of its Coleman Research Corporation and Thermo Information Solutions subsidiaries.

He formed Armel Scientifics, LLC, which invested in over 30 start-up companies in Life Sciences and Advanced Technology. He holds a B.E.S. in electrical engineering from The Johns Hopkins University, a Master of Science in engineering management from George Washington University, and has completed the program for Management Development at the Harvard University School of Business. He completed the course work for a Ph.D. in International Politics at the Catholic University of America but did not complete the dissertation. Mr. Melissaratos currently serves as a member of the Board of Directors of Avatech Solutions, Inc. in Owings Mills, MD, a software and technology firm; and as a member of the Advisory Board of Stronghold Advisors, a middle-market advisory firm in the Mid-Atlantic region, in Columbia, MD. Neither of these companies engage in business with Spherix.

Mr. Thomas B. Peter was elected to the Spherix Board of Directors in May 2009. He spent his entire 33-year career in the pharmaceutical industry. Most recently he served as a Regional Vice President for GlaxoSmithKline (GSK). Prior to that, Mr. Peter had significant experience dealing with managed care organizations, serving as Director of National Accounts Sales at GSK, and before that position, worked as a Group Marketing Director. Mr. Peter is a biology major graduate of Gettysburg College and a Master's graduate of St. Joseph's University in Philadelphia. He is not now, nor has he been for the past five years, a director of a public, for-profit company other than Spherix.

Dr. Robert J. Vander Zanden, Board Member since 2004, was elected Chairman of the Board in 2009. Having served as a Vice President of R&D with Kraft Foods International, he brings a long and distinguished career in applied technology, product commercialization, and business knowledge of the food science industry to Spherix. Dr. Vander Zanden holds a Ph.D. in Food Science and an M.S. in Inorganic Chemistry from Kansas State University, and a B.S. in Chemistry from the University of Wisconsin — Platteville, where he was named a Distinguished Alumnus in 2002. In his 30-year career, he has been with ITT Continental Baking Company as a Product Development Scientist; with Ralston Purina's Protein Technology Division as Manager Dietary Foods R&D; with Keebler as Group Director, Product and Process Development (with responsibility for all corporate R&D and quality); with Grupo Gamesa, a Frito-Lay Company, as Vice President, Technology; and with Nabisco as Vice President of R&D for their International Division. With the acquisition of Nabisco by Kraft Foods, he became the Vice President of R&D for Kraft's Latin American Division. Dr. Vander Zanden retired from Kraft Foods in 2004. He currently holds the title of Adjunct Professor and Lecturer in the Department of Food, Nutrition and Packaging Science at Clemson University, where he also is a member of their Industry Advisory Board. His focus on achieving product and process innovation through training, team building and creating positive working environments has resulted in his being recognized with many awards for product and packaging innovation. Dr. Vander Zanden is not now, nor has he been for the past five years, a director of a public, for-profit company other than Spherix.

Corporate Governance

The Audit Committee members are Mr. Brown, Chair; Mr. Melissaratos, and Dr. Vander Zanden. The Audit Committee Charter is available on the Company's website at www.spherix.com. Each member of the Audit Committee satisfies the independence requirements and other established criteria of NASDAQ and the Securities and Exchange Commission. The Board of Directors believes that, while the members of its Audit Committee have substantial financial and management experience and are fully qualified to carry out the functions of the Audit Committee, none of its members meets the requirements of an audit committee financial expert as defined in the Securities and Exchange Commission rules.

Executive Officers

The Executive Officers of the Company are elected annually by the Board of Directors and are listed in the following table.

Name	Age	Position
Robert L. Clayton	48	CFO and Treasurer
Claire L. Kruger	53	Chief Executive Officer and Chief Operating Officer
Robert A. Lodder	52	President

Drs. Kruger and Lodder's professional experience are discussed above.

Mr. Robert L. Clayton was elected to the Office of CFO and Treasurer in November 2009. He previously served as Interim CFO, Director of Finance, and Controller. Prior to joining Spherix, he was a Senior Auditor for the Public Accounting Firm Rubino & McGeehin Chartered. Mr. Clayton holds a B.S. in business and management from the University of Maryland and a C.P.A. from the District of Columbia. He is not now, nor has he been for the past five years, a director of a public, for-profit company other than Spherix.

Compliance with Section 16(a) of the Exchange Act

Section 16(a) Beneficial Ownership Regarding Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), requires the Company's Directors and Executive Officers, and anyone who beneficially owns ten percent (10%) or more of the Company's common stock, to file with the Securities and Exchange Commission initial reports of beneficial ownership and reports of changes in beneficial ownership of common stock. Such persons are required by regulations of the Securities and Exchange Commission to furnish the Company with copies of all Section 16(a) forms they file.

Based solely upon a review of (i) copies of the Section 16(a) filings received by the Company during or with respect to 2011 and (ii) certain written representations of its Officers and Directors, the Company believes that each filing required to be made pursuant to Section 16(a) of the Exchange Act during and with respect to 2010 and 2011 to date was filed in a timely manner.

Code of Ethics

The Company has adopted a worldwide Code of Ethics, which is available on the Company's website at www.spherix.com.

EXECUTIVE COMPENSATION

We strive to pay our named executive officers at or near the median paid by comparable companies. In 2007, the Compensation Committee hired an outside company, Equilar, Inc., to compare the total compensation of our executives to the total compensation of fourteen (14) companies identified by Equilar, Inc. to be peer companies to us. The Equilar Report on Executive Compensation showed that our executives are not compensated at the same level as colleagues in peer companies. Based upon our fiscal health, however, it has been determined by the Compensation Committee that no special efforts should be made to bring executive total compensation to equivalent levels of those in peer companies. The Compensation Committee recommended to the Board the salary adjustments for our executive officers. In 2010, the Board approved annual salaries for Dr. Kruger, Dr. Lodder and Mr. Clayton of $270,000, $220,000 and $200,000, respectively. For 2011, the Board approved annual salaries for Dr. Kruger, Dr. Lodder and Mr. Clayton of $278,100, $226,600 and $206,000, respectively.

The following Summary of Compensation table sets forth the compensation paid by the Company during the two years ended December 31, 2011, to all Executive Officers earning in excess of $100,000 during any year.

Summary of Compensation

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Award ($)	Option Award ($)(1)	Non-Equity Incentive Plan Compensation ($)(2)	Change in Pension Value and Non-Qualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
C. Kruger	2011	278,100	—	—	531	139,050	—	—	417,681
CEO and COO	2010	270,000	—	—	—	135,000	—	—	405,000
R. Lodder	2011	226,600	—	—	273	90,640	—	—	317,513
President	2010	220,000	—	—	—	88,000	—	—	308,000
R. Clayton	2011	206,000	—	—	273	72,100	—	—	278,373
CFO and Treasurer	2010	200,000	—	—	118	70,000	—	—	270,118

(1) On November 15, 2011, C. Kruger, R. Lodder and R. Clayton were granted stock options for 10,000, 5,000, and 5,000 shares, respectively. On February 17, 2006, R. Clayton was granted stock options for 2,000 shares. Information regarding forfeiture and assumptions made in the valuation are disclosed in Note 7 of the Company's Annual Financial Statements.

(2) Awards pursuant to the May 12, 2005 Spherix Incorporated Incentive Compensation Plan.

Outstanding Equity Awards at Fiscal Year-End

	Option Awards				Stock Awards	
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock that have not Vested (#)	Market Value of Shares or Units of Stock that have not Vested ($)
C. Kruger	—	10,000	$ 2.00	11/14/2016	—	—
R. Lodder	—	5,000	$ 2.00	11/14/2016	—	—
R. Clayton	—	5,000	$ 2.00	11/14/2016	—	—

Potential Payment Upon Termination or Change in Control

We have agreed to pay our officers one year salary and health and welfare (COBRA) benefits upon termination by us or following a change of control.

Unless otherwise agreed by the Board of Directors, the other staff members would be entitled to severance upon termination of employment pursuant to the Company's severance policy. The policy provides:

Completed Service Years	Severance Pay
>1 year	10 days
1 but less than 2 years	15 days
2 but less than 3 years	20 days
3 but less than 4 years	25 days
4 or more years	30 days

Director Compensation

The following table summarizes the compensation paid to non-employee directors during the year ended December 31, 2011.

Name	Fees Earned Paid in Cash ($)	Options ($)	All Other Compensation ($)	Total ($)
Douglas T. Brown	22,800	8,550	—	31,350
Aris Melissaratos	21,400	8,550	—	29,950
Thomas B. Peter	17,800	8,550	—	26,350
Robert J. Vander Zanden	32,400	8,550	—	40,950

Non-employee directors receive the following annual compensation for service as a member of the Board:

Annual Retainer	$	5,000	To be paid in cash at May Board Meeting annually.
Stock Options	$	10,000	To be calculated by dividing $10,000 by the closing stock price the day the Stock Options are awarded; and at the May Board Meeting annually thereafter. The Options will vest in full on the day of award and will be exercisable for a period of five (5) years.
Board Meeting Fees	$	2,500	To be paid for all in-person Board Meetings. Members must be present to be paid.
Committee Meeting Fees	$	800	To be paid for all in-person Committee Meetings. Members must be present to be paid.
Teleconference Fees	$	300	To be paid for all teleconferences called by either the Chairman of the Board, the President, or by the Chairman of the relevant Committee. Members must be on-line to be paid.
Additional Retainer	$	5,000	To be paid to the Chairman of the Board upon election annually.
Additional Retainer	$	1,000	To be paid to the Chairman of the Audit Committee at May Board Meeting annually.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT, AND RELATED STOCKHOLDERS

The following table sets forth the shares of Common Stock beneficially owned by all Executive Officers and Directors as a group as of March 18, 2011.

Beneficial Ownership of Common Stock by Executive Officers and Directors

Title of Class	Name of Beneficial Owner	Amount and Nature of Ownership	Percent Of Class
Common	Douglas T. Brown	9,758(1)	*
Common	Robert L. Clayton	—(1)	*
Common	Claire L. Kruger	3,000(1)	*
Common	Robert A. Lodder, Jr.	2,285(1)	*
Common	Aris Melissaratos	7,505(1)	*
Common	Thomas B. Peter	6,543(1)	*
Common	Robert J. Vander Zanden	8,858(1)	*
Common	All Executive Officers and Directors as a Group	37,949(1)	1.2%

* Less than 1% of the outstanding shares of our Common Stock.

(1) Included in the number of shares beneficially owned by D.T. Brown, R.L. Clayton, C.L. Kruger, R.A. Lodder, A. Melissaratos, T.B. Peter, R.J. Vander Zanden and All Executive Officers and Directors as a Group are 5,877, 0, 0, 0, 5,877, 5,877, 5,877 and 23,508 shares, respectively, which such persons have a right to acquire within 60 days pursuant to stock options.

All directors and executive officers as a group, beneficial owners of 37,949 shares of Common Stock, owned 1.2% of the 3,094,961 outstanding shares. With the exception of Cede & Co., the holder of record for certain brokerage firms and banks, no other person is known by us to own beneficially more than 5% of our outstanding Common Stock.

In December 2010, the Company and American Stock Transfer and Trust Company, LLC, as Rights Agent, entered into a First Amendment to Rights Agreement to amend the Rights Agreement dated as of February 16, 2001 between the Company and the Rights Agent. The Amendment extends the term of the Rights Agreement. The Rights Agreement was scheduled to expire on December 31, 2010. The Amendment extends the term of the Rights Agreement through December 31, 2012.

The Rights Agreement provides each Stockholder of record a dividend distribution of one “right” for each outstanding share of the Company’s Common Stock. Rights become exercisable at the earlier of ten days following: (1) a public announcement that an acquirer has purchased or has the right to acquire 10% or more of the Company’s Common Stock, or (2) the commencement of a tender offer which would result in an offeror beneficially owning 10% or more of the outstanding Common Stock of the Company. All rights held by an acquirer or offeror expire on the announced acquisition date, and all rights expire at the close of business on December 31, 2012. Each right entitles a Stockholder to acquire, at a stated purchase price, 1/100 of a share of the Company’s preferred stock, which carries voting and dividend rights similar to one share of its Common Stock. Alternatively, a right holder may elect to purchase for the stated price an equivalent number of shares of the Company’s Common Stock at a price per share equal to one-half of the average market price for a specified period. In lieu of the stated purchase price, a right holder may elect to acquire one-half of the Common Stock available under the second option. The purchase price of the preferred stock fractional amount is subject to adjustment for certain events as described in the Agreement. At the discretion of a majority of the Board and within a specified time period, the Company may redeem all of the rights at a price of $0.001 per right. The Board may also amend any provisions of the Agreement prior to exercise.

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

The current Board of Directors consists of Mr. Douglas T. Brown, Dr. Claire L. Kruger, Dr. Robert A. Lodder, Mr. Aris Melissaratos, Mr. Thomas P. Peter, and Dr. Robert J. Vander Zanden. The Board of Directors has determined that a majority of its members, being Messrs. Brown, Melissaratos, Peter, and Vander Zanden, are independent Directors within the meaning of the applicable NASDAQ rules. The Company’s Audit, Compensation, and Nominating Committees consist solely of independent Directors.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Grant Thornton LLP for Fiscal 2011

The following table sets forth the fees paid by the Company to Grant Thornton LLP for audit and other services provided in 2011 and 2010:

	2011	2010
Audit fees	$ 154,000	$ 130,000
Audit related fees	22,000	16,000
Tax fees	—	—
Total	$ 176,000	$ 146,000

The Audit Committee considered whether the provision of services referenced above is compatible with maintaining Grant Thornton’s independence. The Audit Committee’s policy is to pre-approve all audit and permissible non-audit services provided by the independent auditors. These services may include audit services, audit-related services, tax services and other services. Pre-approval is generally provided for up to one year. The Audit Committee may also pre-approve particular services on a case-by-case basis.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENTS, SCHEDULES

(a) Exhibits

3.1	Certificate of Incorporation and Bylaws of the Company (incorporated by reference to the Company's Annual Proxy Statement for meeting held on May 15, 1992, as filed with the Commission)
3.2	Certificates of Amendment of the Company (incorporated by reference to the Company's Proxy Statement for its May 1996, May 2000, May 2001, and November 2011 annual meetings, as filed with the Commission)
3.3	Amended and Restated By-Laws of Spherix Incorporated (incorporated by reference to Form 8-K filed November 23, 2009)
4.1	Rights Agreement dated as of February 16, 2001, between Spherix Incorporated and American Stock Transfer and Trust Company (incorporated by reference to Form 8-K filed March 6, 2001)
4.2	First Amendment to Rights Agreement dated as of December 20, 2010, between Spherix Incorporated and American Stock Transfer and Trust Company (incorporated by reference to Form 8-K filed December 20, 2010)
4.3	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (incorporated by reference to Form 8-K filed October 8, 2010)
4.4	Form of Warrants Agreement (incorporated by reference to Form 8-K filed November 18, 2009)
4.5	Form of Warrants Agreement (incorporated by reference to Form 8-K filed October 8, 2010)
4.6	Form of Warrants Agreement (incorporated by reference to Form 8-K filed January 20, 2011)
4.7	Form of Warrants Agreement (incorporated by reference to Form 8-K filed October 27, 2011)
4.8	Form of Warrants Agreement (incorporated by reference to Form 8-K filed February 3, 2012)
4.9	Placement Agent Agreement, dated as of November 6, 2009, by and between the Company and Rodman & Renshaw, LLC. (incorporated by reference to Form 8-K filed November 18, 2009)
4.10	Amendment to the Placement Agent Agreement, dated as of November 17, 2009, by and between the Company and Rodman & Renshaw, LLC. (incorporated by reference to Form 8-K filed November 18, 2009)
4.11	Placement Agent Agreement, dated as of August 12, 2010, by and between the Company and Rodman & Renshaw, LLC. (incorporated by reference to Form 8-K filed October 8, 2010)
4.12	Amendment, dated as of November 17, 2010, to Placement Agent Agreement, dated as of November 6, 2009, by and between the Company and Rodman & Renshaw, LLC. (incorporated by reference to Form 8-K filed January 20, 2011)
4.13	Placement Agent Agreement, dated as of October 25, 2011, by and between the Company and Rodman & Renshaw, LLC. (incorporated by reference to Form 8-K filed October 27, 2011)
4.14	Placement Agent Agreement, dated as of January 31, 2012, by and between the Company and Rodman & Renshaw, LLC. (incorporated by reference to Form 8-K filed February 3, 2012)
10.1	Summary of Annual Compensation of Members of the Board of Directors of Spherix Incorporated (incorporated by reference to Form 8-K filed May 28, 2010)
10.2	Employment Agreement dated as of August 15, 2007, by and between Claire L. Kruger and the Company (incorporated by reference to Form 10-Q dated September 30, 2007)
10.3	Amendment To Employment Agreement dated as of May 25, 2010, by and between Claire L. Kruger and the Company (incorporated by reference to Form 8-K filed May 28, 2010)
10.4	Employment Agreement dated as of August 16, 2007, by and between Robert A. Lodder and the Company (incorporated by reference to Form 10-Q dated September 30, 2007)
10.5	Amendment To Employment Agreement dated as of May 25, 2010, by and between Robert A. Lodder and the Company (incorporated by reference to Form 8-K filed May 28, 2010)
10.6	Employment Agreement dated as of May 25, 2010, by and between Robert L. Clayton and the Company (incorporated by reference to Form 8-K filed May 28, 2010)
10.7	Employment Agreement dated as of May 25, 2010, by and between Katherine M. Brailer and the Company (incorporated by reference to Form 8-K filed May 28, 2010)
10.8	Letter Agreement dated as of January 13, 2011, by and between Gilbert V. Levin, M. Karen Levin and the Company (incorporated by reference to Form 10-K dated March 30, 2011)
10.9	1997 Stock Option Plan (incorporated by reference from the Company's Proxy Statements for its May 1998, May 2001, May 2005 and November 2011 annual meetings, as filed with the Commission)

10.10	Lease agreement dated October 4, 2007, between Elizabethean Court Associates III Limited Partnership and the Company (incorporated by reference to Form 10-Q dated September 30, 2007)
10.11	Amendment to Office Building Lease, between Elizabethean Court Associates III Limited Partnership and the Company (incorporated by reference to Form 8-K filed March 23, 2012)
10.12	Settlement Agreement dated March 16, 2011, between the Biospherics Incorporated (a wholly-owned subsidiary of the Company) and Inalco S.p.A (incorporated by reference to Form 8-K filed on March 21, 2011)
10.13	Securities Purchase Agreement dated November 16, 2009, between the Company and certain investors (incorporated by reference to Form 8-K filed November 18, 2009)
10.14	Securities Purchase Agreement dated October 7, 2010, between the Company and certain investors (incorporated by reference to Form 8-K filed October 8, 2010)
10.15	Securities Purchase Agreement dated January 19, 2011, between the Company and certain investors (incorporated by reference to Form 8-K filed January 20, 2011)
10.16	Securities Purchase Agreement dated October 25, 2011, between the Company and certain investors (incorporated by reference to Form 8-K filed October 27, 2011)
10.17	Securities Purchase Agreement dated February 2, 2012, between the Company and certain investors (incorporated by reference to Form 8-K filed February 3, 2012)
10.18	License Agreement dated June 22, 2010 between the University of Kentucky Research Foundation and Biospherics Incorporated
21	List of Subsidiaries (incorporated by reference to Form S-1 Amendment #1 filed on September 3, 2010)
23	Consent of Grant Thornton LLP, Independent Auditors(1)
31.1	Certification of Chief Executive Officer of Spherix Incorporated pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer of Spherix Incorporated pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer of Spherix Incorporated pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

32.2	Certification of Chief Financial Officer of Spherix Incorporated pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.1	XBRL Instance Document
101.2	XBRL Taxonomy Extension Schema Document
101.3	XBRL Taxonomy Extension Calculation Linkbase Document
101.4	XBRL Taxonomy Extension Definition Linkbase Document
101.5	XBRL Taxonomy Extension Label Linkbase Document
101.6	XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

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

Spherix Incorporated
(Registrant)

Date: March 29, 2012

By: /s/ Claire L. Kruger
Claire L. Kruger
Chief Executive Officer and Chief Operating Officer

Date: March 29, 2012

By: /s/ Robert L. Clayton
Robert L. Clayton
Chief Financial Officer and Treasurer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

/s/ Douglas T. Brown Douglas T. Brown	Director	March 29, 2012
/s/ Robert L. Clayton Robert L. Clayton	CFO and Treasurer	March 29, 2012
/s/ Claire L. Kruger Claire L. Kruger	Chief Executive Officer and Chief Operating Officer	March 29, 2012
/s/ Robert A. Lodder, Jr. Robert A. Lodder, Jr.	Director and President	March 29, 2012
/s/ Aris Melissaratos Aris Melissaratos	Director	March 29, 2012
/s/ Thomas B. Peter Thomas B. Peter	Director	March 29, 2012
/s/ Robert J. Vander Zanden Robert J. Vander Zanden	Chairman of the Board	March 29, 2012

LICENSE AGREEMENT

THIS AGREEMENT, made and entered into this the 22nd day of June, 2010 (the Effective Date) by and between the University of Kentucky Research Foundation, a corporation duly organized and existing under the laws of the Commonwealth of Kentucky and having its principal office at Lexington, Kentucky, U.S.A. (hereinafter "***UKRF***"), and Biospherics, Incorporated, a corporation duly organized under the laws of Delaware and having its principal office at 6430 Rockledge Drive, #503, Westmoreland Building, Bethesda, Maryland 20817, U.S.A. (hereinafter "***LICENSEE***").

WITNESSETH

WHEREAS, UKRF desires to license the Licensed Technology (all capitalized terms as defined herein) to LICENSEE for Deployment by LICENSEE; and

WHEREAS, LICENSEE desires an exclusive license from UKRF under the Licensed Technology and is competent to facilitate Deployment of "Licensed Product(s)" or products similar to the Licensed Product(s) and will use reasonable efforts to develop one or more Licensed Products;

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto agree as follows:

ARTICLE 1 - DEFINITIONS

For the purposes of this Agreement, the following words and phrases shall have the following meanings:

1.1 "***Affiliate***" of a party means any corporation, company or other legal entity (a) controlled by the party, (b) controlling the party or (c) controlled by the corporation, legal entity or persons which control the party. For the purposes of this paragraph, to "control" a corporation, company or entity means to own or control, either directly or indirectly such as by intermediary entities now or hereafter formed, (a) fifty percent (50%) or more of voting stock or other securities entitled to vote for election of directors (or other managing authority) or (b) more than 50% of the equity interest of the corporation, company or entity; or (c) if the corporation, company or entity does not have outstanding shares or securities, more than 50% of the ownership interest representing the right to make decisions for the corporation, company or entity.

1.2 "***Clinical Development***" means any activity, whether intellectual or physical, intended to make progress towards commercialization, including, but not limited to, protocol development, negotiations with a third party regarding research or other commercialization work, tests or research, evaluation of such tests or research, pursuit of regulatory approval of rights, or the like, related to the Licensed Technology.

1.3 "***Deploy***" or "***Deployment***" means to make, have made, use, sell, license, offer to sell, offer to license, or import into the U.S., or otherwise commercialize.

1.4 "***Know-How***" means any confidential information related to the Patent Rights and made or developed by an inventor(s) thereof, or others working under the direction of any inventor(s), and known by UKRF that can be used by LICENSEE in connection with Deployment of Licensed Products or Licensed Processes, including specifications, designs, plans, inventions, data, prototypes, methods, processes, business or other technical information that derives value by virtue of its not being publicly known; provided, however, that Know-How does not include information: (a) lawfully received by LICENSEE free of restriction from another source having the right to furnish the information free of restriction; (b) after it has become readily available to the public without breach of this Agreement by LICENSEE; and (c) that, at the time of disclosure to LICENSEE, was known to LICENSEE free of restriction.

1.5 "***Licensed Process(es)***" means any process that at any time can be covered in whole or in part by subject matter described in the Patent Rights.

1.6 "***Licensed Product(s)***" means any product that at any time can be covered in whole or in part by subject matter described in the Patent Rights; or which the Deployment thereof by LICENSEE, sub-licensee, or direct or indirect customers of any of the foregoing would, but for this Agreement, constitute infringement or misappropriation of the Licensed Technology.

1.7 "***Licensed Technology***" means the Licensed Process(es), Licensed Product(s), the Patent Rights, and Know-How.

1.8 "***LICENSEE***" means Biospherics, Inc. and any Affiliate thereof.

1.9 "***Patent Rights***" means the entirety of UKRF's right, title and interest in: (a) (1) Invention Disclosure # 1482, dated Feb. 6, 2007, entitled "D-tagatose as a Lipid Lowering Agent for Prevention and Treatment of Atherosclerosis," derived from research at UKRF by Dr. Robert Lodder or others working under his direction and attached hereto and made a part hereof as Appendix "A"; and (2) Invention Disclosure #09/1967, dated October 20, 2009, entitled "D-tagatose Formulations for Treatment of Dyslipidemias and Atherosclerosis," related to research at UKRF by Dr. Robert Lodder or others working under his direction and attached hereto and made a part hereof as Appendix "B"; and (b) any corresponding or related right thereof in any jurisdiction in the world including, but not limited to, the United States patents and applications and Foreign patents and applications issuing from the foregoing, including United States provisional patent application 61/193,192, entitled "Effects of Diets Containing Sucrose vs. D-tagatose in Hypercholesterolemic Mice," filed November 4, 2008; (2) International Application PCT/US09/63293, entitled "Stable Compositions and Methods of D-Tagatose for Atherosclerosis, Metabolic Syndrome and Their Symptoms," filed November 4, 2009; and (c) any continuations, continuations-in-part, divisions, reissues, reexaminations, or extensions of any of the foregoing, or any other patent right that claims the benefit of the filing date of any of the foregoing.

1.10 "***Territory***" means: worldwide.

ARTICLE 2 - GRANT

2.1 License Grant. UKRF hereby grants to LICENSEE and its Affiliates an exclusive license and right under the Licensed Technology to Deploy the Licensed Technology within the Territory for the term beginning on the Effective Date until this Agreement expires as provided herein. This grant is expressly subject to the rights of the U.S. Government, if any, with the understanding that LICENSEE does not believe any such rights exist as to the Licensed Technology.

2.2 Exclusive Nature of Grant. In order to establish a period of exclusivity for LICENSEE and its Affiliates, UKRF hereby agrees that it shall not grant any other license to Deploy the Licensed Technology, Licensed Product(s), Know-How and Licensed Process(es) during the period of time commencing with the Effective Date of this Agreement and terminating with the full end of the term of this Agreement, unless sooner terminated as hereinafter provided. LICENSEE is relying on this provision as an essential part of the economic basis for entering this Agreement.

2.3 Right to Sublicense. LICENSEE shall have the right to sublicense any of the rights, privileges and licenses granted hereunder, in its sole discretion, to any party for any legitimate business purpose in the Territory.

2.4 Obligations in Sublicenses. LICENSEE agrees that any sublicenses granted by it shall include a contractual provision that, upon reasonable notice to LICENSEE, UKRF will have the right and

ability to proceed directly against the sublicensee to require such sublicensee to comply with all terms of the sublicense agreement. LICENSEE further agrees to include the substance of ARTICLES 4, 5, 10, 12, 13, 14, 15 and 16 of this Agreement in all sublicense agreements.

2.5 Copy of Sublicenses. LICENSEE agrees to forward to UKRF a copy of each fully executed sublicense agreement, and further agrees to forward to UKRF annually a copy of any reports relating to the Licensed Field received by LICENSEE from its sublicensees during the preceding twelve (12) month period under the sublicenses.

2.6 Retroactive Sublicenses. Any sublicense permitted under this Section may be made effective retroactively, but not before the Effective Date.

2.7 Certain New Inventions Owned by LICENSEE. Any inventions related to the Licensed Technology where the work necessary to the invention was not performed at the University of Kentucky or by UKRF or using UKRF resources, and was funded, conceived, or otherwise developed by or on behalf of LICENSEE, is the sole property of the LICENSEE.

ARTICLE 3 - DUE DILIGENCE FOR CLINICAL DEVELOPMENT

3.1 Diligence Requirements. LICENSEE shall use reasonable efforts to Deploy Licensed Product(s) and/or Licensed Process(es). At a minimum, LICENSEE shall:

Prepare a study methodology / protocol for a pre-clinical study to further investigate the safety and efficacy of D-tagatose formulations for prevention or treatment of one or more of the following conditions: atherosclerosis, metabolic syndrome, obesity or diabetes. This study may be used to inform the preparation of a clinical trial protocol by mid-2011.

Initiate an appropriately designed pre-clinical animal study, as described above, to be conducted under Current Good Laboratory Practice, as will be required for regulatory submission, by the end of 2011.

LICENSEE will update its clinical development plan at least every year until a first commercial sale of a Licensed Product is achieved.

ARTICLE 4 - ROYALTIES

4.1 For the rights, privileges, and license granted hereunder, LICENSEE shall pay to UKRF, on behalf of itself and its sublicensees, in the manner hereinafter provided to the end of the term of the Patent Rights or until this Agreement shall be terminated as provided herein under Article 8, a royalty in the amount of 3 percent (3%) of the Net Sales Price (as defined immediately below) of the Licensed Product(s) sold by LICENSEE or any sublicensee, plus ten percent (10%) of any other consideration LICENSEE receives from any sublicensees. The parties acknowledge that LICENSEE has borne all costs pertaining to the preparation and filing of the Patent Rights to date.

4.2 As used herein, the phrase “Net Sales Price” shall mean LICENSEE’s or any sublicensee’s collected billings for market sales of Licensed Product(s) less the sum of the following:

(a) Discounts allowed in amounts customary in the trade;
(b) Sales, tariff duties, governmental charges and/or use taxes directly imposed and with reference to particular sales;
(c) Outbound transportation prepaid or allowed;
(d) Amounts allowed or credited on returns; and

No deductions shall be made for commissions paid to individuals whether they are with independent sales agencies or regularly employed by LICENSEE and on its payroll, or for cost of collections. Licensed Product(s) shall be considered “sold” when billed out or invoiced. Other than those payments expressly set forth in this Agreement, each party will be responsible for the costs it incurs in carrying out its obligations under this Agreement.

4.3 No multiple royalties shall be payable because the Licensed Product(s) is covered by more than one patent application or patent licensed under this Agreement.

4.4 Royalty payments shall be paid in United States dollars in Lexington, Kentucky, or at such other place as UKRF may reasonably designate consistent with the laws and regulations controlling in any foreign country. Any withholding taxes which LICENSEE or any sublicensee shall be required by

law to withhold on remittance of the royalty payments shall be deducted from royalty payments paid to UKRF. LICENSEE shall furnish UKRF the original copies of all official receipts for such taxes. If any currency conversion shall be required in connection with the payment of royalties hereunder, such conversion shall be made by using the exchange rate prevailing at a first-class foreign exchange bank on the last business day of the calendar quarterly reporting period to which such royalty payments relate.

4.5 The LICENSEE or its Affiliate(s) will pay UKRF a quarterly royalty on all sales of Licensed Products by the LICENSEE.

4.6 Royalty payments will continue for a particular country until the expiration of the Licensed Patent(s) in that country, at which point the royalties for that country will terminate.

ARTICLE 5 - REPORTS AND RECORDS

5.1 During the term and for a period of three (3) years following the end of the calendar year to which they pertain, LICENSEE shall keep full, true and accurate books of account containing all particulars that may be necessary for the purpose of showing the amount payable to UKRF by way of royalty as aforesaid. Said books of account shall be kept at the principal place of business of the LICENSEE or any relevant division or Affiliate of LICENSEE to which this Agreement relates. UKRF shall have the right to inspect and copy such books and records of LICENSEE to the extent necessary for such purpose, provided that such activity shall be conducted during LICENSEE's regular business hours upon at least five (5) days prior written notice and, provided further that, UKRF may not inspect more than once in any calendar year. The cost of inspection shall be paid by UKRF.

5.2 LICENSEE, within thirty (30) days after December 31, of each year, shall deliver to UKRF true and accurate reports, giving such particulars of the business conducted by LICENSEE during the preceding twelve-month period under this Agreement as shall be pertinent to a royalty accounting hereunder. These shall include at least the following:

(a) All Licensed Products manufactured and sold;
(b) Total billings for Licensed Product sold;
(c) Deductions applicable as provided in Article 4;
(d) Total royalties due (or a statement that none are due);
(e) Names and addresses of all sublicensees of LICENSEE; and
(f) Annually, the LICENSEE's certified financial statements for the preceding twelve (12) months including, at a minimum, a Balance Sheet and an Operating Statement.

5.3 LICENSEE will provide a copy within 30 days of any other form of financial report, business plan or other similar report related to the Licensed Technology that it issues to any third party or to shareholders. In addition, upon written request of UKRF, LICENSEE shall make one or more representatives available for a confidential update about the status of the company. Such updates shall be no

more frequent than once per year and UKRF will reimburse any reasonable out-of-pocket expenses incurred by LICENSEE in complying with such update requests.

ARTICLE 6 - PATENT PROSECUTION

6.1 Prosecution and Maintenance of Patent Rights. During the term hereof, the filing, prosecution and maintenance of all Licensed Technology, Patent Rights, Patent Applications, Improvement Patent Applications, and Patent Rights Patents shall be the primary responsibility of LICENSEE. Subject to reasonable, timely consideration of UKRF's comments on pending patent matters, LICENSEE will have discretion and control over the filing, prosecution and maintenance of the Licensed Technology, Patent Rights, Patent Applications and Patent Rights Patents including, but not limited to, the entire right to file nonprovisional, continuing, divisional, or continuation-in-part applications for United States patents relating to the Licensed Technology, and all reissues, Reexamination Certificates, and extensions thereof, along with the right to file applications for patent or industrial property rights derived therefrom in any foreign country and claim priority to the foregoing, to the full end of the term for which said patents may be granted. All such patent applications shall be in the name of UKRF. LICENSEE shall be solely responsible for such patent expenses. LICENSEE will also provide to UKRF copies of all substantive filings and correspondence to and from the patent offices, in advance of filing, and consult with UKRF as to the proposed filings.

6.2 Conflict in Patent Prosecution. LICENSEE confirms agreement that, in the event its patent counsel becomes aware of an actual conflict between the parties, that it will advise the parties of the fact that a conflict appears to exist. For purposes of clarification, however, patent counsel for Biospherics and its Affiliate(s) do not represent UKRF or any Affiliate thereof under this Agreement as to the subject matter thereof, and need only notify the parties of such a conflict to permit UKRF an opportunity to take any action it deems appropriate to protect the Patent Rights.

6.3 LICENSEE shall also have similar discretion and control over, at LICENSEE's expense, to the designation of countries for the filing, prosecution and maintenance of foreign counterparts to patent applications and patents included in the Licensed Technology including the Patent Rights and UKRF agrees to cooperate as necessary to cause such filing(s), prosecution(s) and/or maintenance(s) to be effectuated. Such foreign patent applications shall be filed in the name of UKRF, title shall be in UKRF, and UKRF's interest in patent applications and patents issuing thereunder shall be included in the Patent Rights and the license hereunder. LICENSEE will notify UKRF promptly if LICENSEE decides, in its sole discretion, not to file any particular foreign counterparts to patent applications related to the Licensed Technology. UKRF may then effectuate such filing(s), prosecution(s) and maintenance(s) in those countries, solely at the expense of UKRF, and such patent applications and any patent rights issuing therefrom will be excluded from the license under this Agreement.

6.4 LICENSEE has sole discretion to abandon any Patent Right, or to not pay the annuity, taxes, or maintenance fees due for any patent application, patent or other similar right. Prior to LICENSEE abandoning any pending or in force item included in the Patent Rights, LICENSEE will provide written notice to UKRF, which shall have the right to provide written notice to LICENSEE within 45 days to take control and prosecute the patent application or maintain the patent that LICENSEE intended to abandon, all at UKRF's sole cost and expense. Upon abandonment by LICENSEE and filing by UKRF, such applications shall be excluded from the license under this Agreement

ARTICLE 7 - PATENT INFRINGEMENT

7.1 Enforcement. The parties will provide reasonable cooperation to one another with respect to enforcing the Licensed Technology, including joining in any suit required for standing to sue by the other, including without limitation making available to the other party or its attorneys any witnesses, records, or other information reasonably requested by LICENSEE.

7.2 Notification of Infringement by Third Party. Each party under this Agreement shall inform the other party promptly in writing of any alleged infringement of the Patent Rights by a third party of which a party has knowledge, and of any available evidence thereof. A party shall give the other party at least ninety (90) days notice before filing a litigation against a third party with respect to any infringement or alleged infringement of the Licensed Technology, or before taking any action which notifies a third party of its infringement or likely infringement of the Licensed Technology; provided, however, that such notice period may be shortened to the extent necessary for a party to prevent irreparable harm to the party occurring during such ninety (90) day period.

7.3 Enforcement Litigation Control. During the term of this Agreement, LICENSEE shall have the sole and exclusive right, but shall not be obligated, to enforce, prosecute, and/or settle at its own expense any infringement of the Licensed Technology, including without limitation the Patent Rights, in the Territory for the Licensed Field, and LICENSEE may, for such purposes, use the name of UKRF as party plaintiff or require UKRF to join a suit, as necessary to provide standing; provided, however, that such right to bring such an infringement action shall remain in effect only for so long as the license granted herein remains effective. No settlement, consent judgment or other voluntary final disposition of the suit may be entered into without the consent of UKRF, which consent shall not unreasonably be withheld. LICENSEE shall indemnify UKRF against any order for costs that may be made against UKRF in such proceedings brought by LICENSEE, except to the extent caused by negligence or willful misconduct of UKRF.

7.4 Award Sharing. In the event that LICENSEE shall undertake the enforcement and/or defense of the Patent Rights by litigation, LICENSEE may withhold up to fifty percent (50%) of the payments otherwise thereafter due UKRF under Article 4 hereunder and apply the same toward reimbursement of up to half of LICENSEE's expenses, including reasonable attorneys' fees, in connection therewith. Any recovery of damages by LICENSEE for each such suit shall be applied first in satisfaction of any un-reimbursed expenses and legal fees of LICENSEE relating to such suit, and next toward reimbursement of UKRF for any payments under Article 4 past due or withheld and applied pursuant to this Article 7. Any award, whether or not collectively granted to both UKRF and LICENSEE, shall be allocated to UKRF at a rate of 20% of the NET award, after accounting for LICENSEE fees and expenses in litigating. Nothing in this Section 7.4 shall modify the obligation of a party to pay for its own attorney's fees pursuant if that party has retained separate counsel when that party does not have the right to control the litigation.

7.5 Procedures Upon Suit By Third Party. Except as otherwise provided under this Agreement, each party is responsible for its own defense and costs in the event of a suit if any of its actions violate, or are alleged to violate, the rights of any third party. UKRF may select its own counsel at its own expense to assist LICENSEE's counsel in the defense.

7.6 Joinder Option. In the event that a declaratory judgment action alleging invalidity, non-infringement, or unenforceability, or lack of ownership of any of the Licensed Technology shall be brought against LICENSEE, UKRF, at its option, shall have the right to join the defense of the action at its own expense.

7.7 Disclosure Legally Required. If either party, on the advice of counsel, is required to disclose the Know-How under applicable law or other lawful demand under lawful process, including a discovery request in litigation, the party shall first give the other party notice of the required disclosure and cooperate with the other party in seeking reasonable protective arrangements for the party required to make a disclosure under applicable law or other demand under lawful process. In no event shall either party's cooperation require that party to take any action which, on the advice of its counsel, could result in the imposition of any sanctions or other penalties against that party.

7.8 Share of Recovered Royalties. LICENSEE, during the exclusive period of this Agreement, shall have the sole right in accordance with the terms and conditions herein to sublicense any alleged infringer for future use of the Licensed Technology. Any upfront fees as part of such a sublicense shall be treated as Section 7.4; all other royalties will be treated as per Article 4.

ARTICLE 8 — BANKRUPTCY AND TERMINATION

8.1 Bankruptcy by LICENSEE. If LICENSEE is adjudged bankrupt or insolvent by a court of competent jurisdiction, or files a petition in bankruptcy, or if the business of LICENSEE shall be placed in the hands of a receiver, assignee or trustee for the benefit of creditors, whether by the voluntary act of LICENSEE or otherwise, this Agreement shall automatically terminate.

8.2 Continuing Nature of Exclusive License. Notwithstanding the foregoing, all rights and licenses granted under or pursuant to this Agreement by UKRF to LICENSEE are, and will otherwise be deemed to be, for purposes of Section 365(n) of the Bankruptcy Code, licenses of rights to "Intellectual Property" as defined under Section 101(56) of the Bankruptcy Code. The parties agree that LICENSEE will retain and may fully exercise all of its rights in the event that any proceeding is instituted by or against UKRF seeking to adjudicate it as bankrupt or insolvent, or seeking liquidation, winding up, reorganization, arrangement, adjustment, protection, relief or composition of it or its debts under any law relating to bankruptcy, insolvency or reorganization or relief of debtors, or seeking entry of an order for relief or the appointment of a receiver, trustee or other similar official for it or any substantial part of its property, or it must take action to authorize any of the foregoing actions (each a "Proceeding"), LICENSEE will have the right to retain and enforce its rights under this Agreement, including but not limited to the following rights:

A. the right to a complete duplicate of, or complete access to, as appropriate, all materials and documentation embodying the Licensed Technology or related to the Licensed Products or Licensed Processes, and any versions or derivatives thereof, to be promptly delivered to LICENSEE if not already in its possession or made available for LICENSEE to copy during business hours: (i) upon any such commencement of a Proceeding upon written request by LICENSEE, unless UKRF continues to perform all of its obligations under this Agreement, or (ii) if not delivered under (i) above, upon the rejection of this Agreement by or on behalf of UKRF, upon written request by LICENSEE; and

B. the right to continue to use and sublicense the Licensed Technology, and all documentation and other materials related thereto, in accordance with the terms and conditions of this Agreement.

8.3 Breach Relating to Royalties. Should LICENSEE fail in its payment to UKRF of royalties due in accordance with the terms of this Agreement, UKRF shall have the right to serve notice upon LICENSEE as provided in Article 16 of its intention to terminate this Agreement within ninety (90) days after receipt of said notice of termination unless LICENSEE shall cure any deficiency by paying to UKRF, within the ninety (90) day period, all such royalties due and payable. Upon the expiration of the ninety (90) day period, if LICENSEE shall not have paid all such royalties due and payable, the rights, privileges and license granted hereunder shall thereupon immediately terminate.

8.4 Material Breach. Upon any material breach or default of this Agreement by either party, other than those occurrences set out in Paragraphs 8.1 and 8.2 and 8.3 hereinabove, which shall always take precedence in that order over any material breach or default referred to in this Paragraph, the non-breaching party shall have the right to terminate this Agreement and the rights, privileges and license granted hereunder by ninety (90) days' notice by certified mail or overnight mail to the breaching party. Such termination shall become effective unless the breaching party shall have cured any such breach or default prior to the expiration of the ninety (90) day period from receipt of the non-breaching party's notice of termination.

8.5 Right to Terminate. If no activity towards Clinical Development occurs during a twelve (12) month consecutive period, either party to this Agreement may elect to terminate this Agreement upon thirty

(30) days prior notice. Further, LICENSEE shall have the right to terminate this Agreement at any time and for any reason on six (6) months' notice to UKRF.

8.6 Rights and Duties Upon Termination. Upon termination of this Agreement for any reason:

A. nothing herein shall be construed to release either party from any obligation that matured prior to the effective date of such termination.

B. LICENSEE and/or any sublicensee thereof may, however, after the effective date of such termination, sell all Licensed Products, and complete Licensed Products in the process of manufacture at the time of such termination and sell the same, provided that LICENSEE shall pay to UKRF the royalties thereon as required by Article 4 of this Agreement and shall submit the reports required by Article 5 hereof on the sales of Licensed Products.

C. the rights and obligations of the parties under this Agreement that expressly or by their nature would or should continue beyond the termination of this Agreement shall remain in effect and survive termination of this Agreement.

ARTICLE 9 — LOSS OF EXCLUSIVITY

9.1 Loss of Grant in a Specific Jurisdiction. In the event LICENSEE declines to initiate patent protection in a given foreign jurisdiction, UKRF will have the right to terminate the license granted under Section 2.1 in that specific jurisdiction.

ARTICLE 10 — INDEMNIFICATION AND PRODUCT LIABILITY

10.1 Indemnification by LICENSEE. LICENSEE shall at all times during the term of this Agreement and thereafter, indemnify, defend and hold University of Kentucky, UKRF, their trustees, officers, employees and affiliates, harmless against all claims and expenses, including legal expenses and reasonable attorneys' fees, arising out of the death of or injury to any person or persons or out of any damage to property and against any other claim, proceeding, demand, expense and liability of any kind whatsoever resulting from the production, manufacture, sales, use, consumption or advertisement of the Licensed Product(s) and/or Licensed Process(es) or arising from any obligation of LICENSEE hereunder except to the extent caused by negligence, fraud, or willful misconduct of UKRF.

10.2 Insurance. At such time as LICENSEE produces, manufactures or sells any Licensed Product(s), LICENSEE will maintain product liability insurance, with an endorsement naming the University of Kentucky Research Foundation, the University of Kentucky, its Board of Trustees, agents officers and employees as additional insureds covering liabilities for the production, manufacture and/or sale of the Licensed Product(s) and Licensed Process(es). The policy of insurance shall contain a provision of non-cancellation except upon the provision of sixty (60) days notice to the University. Policy limits shall be not less than $1,000,000 per person per occurrence.

10.3 Sublicensee Insurance. If LICENSEE sublicenses any of the rights, privileges and licenses granted hereunder, LICENSEE shall require the sublicensee to provide UKRF evidence of such product liability insurance.

10.4 Notice of Claim; Indemnification Procedures. If, during the term of this Agreement, any indemnified party seeking indemnification under this Section has knowledge of any third party claim, action, judgment, or even evidence of a threatened third party claim, action or judgment (collectively, the "Third Party Action"), the following provisions will apply:

(a) the indemnified party having knowledge of the Third Party Action must give written notice within ten (10) days of discovering a Third Party Action to the indemnifying party, with all available details, and the indemnifying party shall have the option, at its sole cost and expense, to retain counsel for the indemnified party (which counsel shall be selected by or be reasonably satisfactory to the indemnified party),

to defend any such demand, claim or lawsuit. Thereafter, the indemnified party shall be permitted to participate in such defense at its own expense, unless the law requires that indemnified party be provided separate counsel.

(b) the indemnified party must provide reasonable assistance to the indemnifying party, including but not limited to testifying, providing information regarding the Third Party Action, and providing access to its books, records and personnel as the indemnifying party reasonably requests in

connection with the investigation or defense. The indemnifying party shall reimburse the indemnified party for out-of-pocket costs incurred in providing the requested assistance, provided that the indemnified party promptly provides reasonable supporting documentation; and

(c) with respect to payment due for indemnification under this Section, the indemnifying party will not be paid until entry of a final judgment, consent decree, or settlement against the indemnified party and the expiration of any applicable appeal period.

ARTICLE 11 — REPRESENTATIONS AND WARRANTIES

11.1 LICENSEE AGREES THAT THE RIGHTS GRANTED ARE MADE AVAILABLE WITHOUT WARRANTY OF ANY KIND EXPRESSED OR IMPLIED INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

11.2 LICENSEE FURTHER AGREES THAT UKRF HAS NOT CONDUCTED NOR HAD CONDUCTED A PATENTABILITY OR INFRINGEMENT STUDY AND THUS MAKES NO CLAIMS THAT THE LICENSED RIGHTS WILL NOT INFRINGE ANY THIRD PARTIES' VALID PATENT RIGHTS.

11.3 UKRF Representations and Warranties. UKRF represents and warrants to LICENSEE that:

A. the Licensed Technology has not been abandoned or disclaimed or otherwise knowingly diminished by UKRF or its agents;

B. the Licensed Technology is not licensed by UKRF to any other person or entity; and

C. no proceedings have been instituted, are pending or, to the knowledge of UKRF, are threatened, which challenge any rights with respect to the ownership, validity, or enforceability of the Licensed Technology or the rights being licensed rights under this Agreement.

ARTICLE 12 - ASSIGNMENT

12.1 UKRF will not have the right to assign or transfer any of its rights and obligations under this Agreement, except that all rights and obligations may be assigned with the written consent of LICENSEE in its sole discretion.

12.2 Any assignment or other transfer which is inconsistent with the foregoing shall be null and void *ab initio*.

12.3 LICENSEE will have the right to freely assign or transfer its rights and obligations under this Agreement to any third party that is at least substantially the same size as LICENSEE based on its resources or revenues, provided that such third party agrees to be bound by this Agreement.

ARTICLE 13 - NON-USE OF NAMES

13.1 LICENSEE shall not use the names of the University of Kentucky nor UKRF, nor any adaptation thereof, in any advertising, promotional or sales literature without prior written consent obtained from UKRF in each case, which consent will not unreasonably be withheld, except that LICENSEE may state that it is licensed by UKRF under the Licensed Technology, including but not limited to one or more of

the patents and/or applications comprising the Patent Rights. This restriction does not apply to disclosure required by law or regulation, including as may be required in connection with any filings made with the Securities and Exchange Commission, or foreign equivalent thereof. Notwithstanding any other provision of this Agreement, UKRF acknowledges and agrees that LICENSEE has the right to identify Dr. Lodder as a principal of LICENSEE, and an inventor or co-inventor with respect to the Patent Rights, and otherwise in connection with the Deployment of the Licensed Technology.

ARTICLE 14 — UNITED STATES MANUFACTURE

14.1 In accord with the provisions of the Bayh-Dole Act, Licensed Products sold in the United States will be manufactured substantially in the United States to the extent possible, unless such requirement is waived by the U.S. Government.

ARTICLE 15 - EXPORT CONTROLS

15.1 It is understood that UKRF is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended, and the Export Administration Act of 1979), and that its obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and/or written assurances by LICENSEE that LICENSEE shall not export data or commodities to certain foreign countries without prior approval of such agency. UKRF neither represents that a license shall not be required nor that, if required, it shall be issued.

ARTICLE 16 - NOTICES AND OTHER COMMUNICATIONS

16.1 Notice Provisions. Any payment, notice, consent, approvals, waivers or other communication pursuant to this Agreement shall be written, reference this Agreement and considered made on the date of mailing if sent to such party by certified first class mail, postage prepaid, addressed to its address below or as it shall designate by written notice given to the other party, or on the date of transmission if sent by facsimile or email:

In the case of UKRF:	University of Kentucky Research Foundation A144 ASTeCC Building Lexington, Kentucky 40506-0286
With a copy to:	University Legal Counsel 301 Main Building

Lexington, Kentucky 40506-0032

In the case of LICENSEE:

Biospherics, Incorporated
6430 Rockledge Drive, #503
Westmoreland Building
Bethesda, MD 20817

With a copy to:

Jeffrey A. Wolfson
Haynes and Boone, LLP
1615 L Street, N.W., Suite 800
Washington, DC 20036
Jeff.wolfson@haynesboone.com

16.2 Revised Address for Notices. A party may change its address, facsimile, or email transmissions for communications by sending written notice to a previously agreed upon address, facsimile, or email.

ARTICLE 17 - CONFIDENTIALITY

17.1 Confidentiality of Know-How. Neither party may disclose Know-How to any third party, other than their consultants and independent contractors as described below, without prior written approval of the non-disclosing party. LICENSEE and UKRF will restrict disclosure of Know-How to its employees, officers, managers, consultants and financial and legal advisors with a need to know; will advise the same of the obligations herein; and will require each such recipient to be bound by comparable written confidentiality obligations. Each party shall take reasonable precautions to prevent the inadvertent or unauthorized disclosure of Know-How in their possession, including at least those precautions taken by each party to protect their own Know-How of similar nature and importance. For the purposes of this Section, "need to know" means that the person requires the Know-How to perform his, her or its responsibilities in connection with this Agreement or to advise the party in confidence regarding the Agreement.

17.2 Indefinite Nature of Confidentiality; Exclusions from Confidentiality. The confidentiality restrictions and obligations upon each party shall last indefinitely due to the trade secret nature of the Know-How, but such restrictions will not apply to any portion of the Know-How that: (a) is disclosed to UKRF in good faith by a third party who is in lawful possession of the information and who has a right to make such a disclosure, (b) is or shall have become part of the public domain, by publication or otherwise through no fault of either party or any third party under obligation to one of the parties, (c) is independently developed by or for the party by persons who did not have access to the information, or (d) the party is required by law, or a court or governmental order, to disclose after reasonable efforts to restrict the nature and scope of such legal obligation to disclose, and the party provides reasonable notice of such a requirement to the non-disclosing party with sufficient time that it may intervene to attempt to limit such disclosure.

17.3 Right to Publish Information that is Not Know-How. Upon disclosure to, and with written consent by, the LICENSEE, which consent will not be unreasonably withheld, UKRF will be free to publish any information within the Licensed Technology that is not Know-How after a sufficient time period to avoid any prejudice to LICENSEE's ability to protect such Licensed Technology using the intellectual property law of any jurisdiction in the Territory. Following such disclosure to and written consent from the LICENSEE, UKRF will be free to publish and discuss such Licensed Technology that is not part of the Know-How for its own use in connection with academic research, teaching, and other entirely educationally-related matters.

ARTICLE 18 — OPTION TO PURCHASE

18.1 LICENSEE Option to Purchase. Upon request by LICENSEE to facilitate any contemplated sale of technology within the Licensed Technology, or of substantially the entire assets of LICENSEE or any Affiliate, UKRF will consider in good faith permitting the outright acquisition of the Licensed Technology by LICENSEE or its Affiliate upon terms to be mutually negotiated by the parties.

ARTICLE 19 - MISCELLANEOUS PROVISIONS

19.1 Governing Law. This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the Commonwealth of Kentucky, U.S.A., except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.

19.2 Entire Agreement. The parties hereto acknowledge that this Agreement sets forth the entire Agreement and understanding of the parties hereto as to the subject matter hereof, and supersedes all prior written or oral negotiations, correspondence, understandings and agreements between the parties respecting such subject matter. This Agreement shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

19.3 Severability. If any provision of this Agreement is held to be illegal, invalid or unenforceable, that provision will be fully severable, and such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining provisions hereof and the Agreement will remain in full force and effect.

19.4 Non-Waiver. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party. No waiver or breach committed by a party in one instance shall constitute a waiver or license to commit or continue breaches in other or like instances.

19.5 Headings. Headings in this Agreement are included for ease of reference only and will have no legal effect.

19.6. Counterparts and Electronic Transmission. This Agreement may be executed in any number of counterparts and all of the counterparts taken together shall for all purposes constitute one binding agreement, notwithstanding that all parties did not originally execute the same counterpart. Further, the copies of this Agreement to be delivered by or to a party or its solicitors may be delivered by facsimile or email transmission.

[INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals and duly executed this License Agreement the day and year first set forth below.

UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION		**BIOSPHERICS, INCORPORATED**	
By:	/s/ Donald G. Keach	By:	/s/ Claire L. Kruger
Name:	Donald G. Keach	Name:	Claire L. Kruger
Title:	Director, I.P.D.	Title:	CEO

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated March 29, 2012, with respect to the consolidated financial statements, which are incorporated by reference in the Annual Report of Spherix Incorporated on Form 10-K for the year ended December 31, 2011. We hereby consent to the incorporation by reference of said reports in the Registration Statements of Spherix Incorporated on Form S-8 (File No. 333-66053 effective October 23, 1998), on Forms S-3 (333-161531 effective October 1, 2009 and 333-177748 effective November 21, 2011), on Form S-2 (File No. 333-126930 effective October 4, 2005) and on Form S-1 (File No. 333-167963 effective on October 6, 2010).

/s/ Grant Thornton LLP

Baltimore, MD
March 29, 2012

Exhibit 31.1

Certification of
Chief Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Claire L. Kruger, certify that:

1. I have reviewed this report on Form 10-K of Spherix Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a—15(f) and 15d—15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Claire L. Kruger
Claire L. Kruger
Chief Executive Officer and Chief Operating Officer
March 29, 2012

Exhibit 31.2

Certification of
Chief Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Robert L. Clayton, certify that:

1. I have reviewed this report on Form 10-K of Spherix Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a—15(f) and 15d—15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Robert L. Clayton
Robert L. Clayton
Chief Financial Officer and Treasurer
March 29, 2012

Exhibit 32.1

Certification of
Chief Executive Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

I, Claire L. Kruger, Chief Executive Officer and Chief Operating Officer of Spherix Incorporated (the "Company"), in compliance with Section 906 of the Sarbanes-Oxley Act of 2002, hereby certify that, to the best of my knowledge, the Company's Annual Report on Form 10-K for the period ended December 31, 2011 (the "Report") filed with the Securities and Exchange Commission:

- Fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

- The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Claire L. Kruger
Claire L. Kruger
Chief Executive Officer and Chief Operating Officer
March 29, 2012

A signed copy of this written statement required by Section 906 has been provided to Spherix Incorporated and will be retained by Spherix Incorporated and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

Certification of
Chief Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

I, Robert L. Clayton, Chief Financial Officer and Treasurer of Spherix Incorporated (the "Company"), in compliance with Section 906 of the Sarbanes-Oxley Act of 2002, hereby certify that, to the best of my knowledge, the Company's Annual Report on Form 10-K for the period ended December 31, 2011 (the "Report") filed with the Securities and Exchange Commission:

- Fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

- The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Robert L. Clayton
Robert L. Clayton
Chief Financial Officer and Treasurer
March 29, 2012

A signed copy of this written statement required by Section 906 has been provided to Spherix Incorporated and will be retained by Spherix Incorporated and furnished to the Securities and Exchange Commission or its staff upon request.