

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

(Mark one)

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

For the fiscal year ended **December 31, 2008**

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

(State or other jurisdiction of incorporation or organization)

52-0849320

(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:

| <u>Title of each class</u> | <u>Name of each exchange on which registered</u> |
|---|--|
| Common Stock (\$.005 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 No

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 No

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

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

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

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

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

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 \$.005) – \$8,145,058

There were 14,357,162 shares of the Registrant's Common Stock outstanding as of March 24, 2009.

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. See the Company’s Form 8-K filed October 10, 2007, for a more detailed statement concerning forward looking statements.

Item 1. DESCRIPTION OF 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 Health Sciences segment was created in July 2007 when Claire L. Kruger, CEO and COO, joined the Company in advance of the anticipated sale of the Company’s wholly-owned subsidiary, InfoSpherix Incorporated. InfoSpherix was the Company’s information services segment and was sold on August 15, 2007 in a move to allow the Company to devote its resources to the activities of the Biospherics segment.

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 now in the name of Spherix Consulting, Inc. and the Company’s patents and other assets and operations are in the process of being transferred into the name of Biospherics Incorporated. The subsidiaries began operations on January 1, 2009. Spherix now 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 developing proprietary products for commercial applications.

Tagatose, a naturally occurring sugar, is a low-calorie, full-bulk sweetener. It is a true sugar that looks, feels, and tastes like table sugar. The Company has discovered and patented a number of health and medical uses for tagatose, which it has branded “Naturlose®”. The Company holds the patents for use of Naturlose as a treatment for Type 2 diabetes, and Biospherics is devoting all of its time and resources to developing Naturlose as a treatment for Type 2 diabetes. The use patents for Naturlose as a treatment for Type 2 diabetes expire in 2012, and the Company believes it will be eligible for an additional extension on its patents following Food and Drug Administration (FDA) approval of Naturlose as a drug. As set forth below, this product is in the development stage and will require substantial additional investment to bring it to market. The Company does not have, and is not likely to obtain, the resources to unilaterally bring Naturlose to market, and the Company is hopeful that it can commercialize Naturlose by either selling or licensing the technology to a third party.

Initial Trials. Initial trials conducted at the University of Maryland School of Medicine found tagatose to be effective as a treatment of Type 2 diabetes in humans. In addition to alleviating symptoms of this major disease, over the one-year trial, all subjects lost weight at physician-approved rates and showed a significant increase in the desirable type of cholesterol, HDL. Other than for initial laxation at high doses (45 to 75 grams per capita per day), accommodated in about two weeks, no untoward effects were found in any of the research. In addition, the studies found that Naturlose produced no rise in blood glucose or insulin levels in diabetic or normal subjects. Naturlose taken before the consumption of glucose produced a blunting effect on the otherwise normally expected rise in blood glucose.

Phase 3 Clinical Trial

In late 2005, the FDA provided the Company permission to begin a Phase 3 clinical trial for Naturlose as a stand-alone drug to treat diabetes. A Phase 3 clinical trial, which gathers evidence regarding effectiveness and safety, is needed to evaluate the overall benefit-risk relationship of new drugs proposed to the FDA. The Phase 3 clinical trial is the last major test, if successful, before requesting drug approval. Since receiving FDA permission to begin the Phase 3 clinical trial, Biospherics’s research and development (R&D) activity has been focused primarily on planning, instituting, and running the Phase 3 trial. The trial is being guided by the Company’s CEO, Claire L. Kruger, an experienced FDA regulatory consultant, and the Company’s President, Robert A. Lodder, an experienced professor of pharmaceutical sciences, as well as drawing on the in-house support and expertise of the staff of the Company’s Health Sciences segment.

The Phase 3 clinical trial started April 2007. The trial is a multicenter, randomized, double-blind, placebo-controlled trial. During the course of the trial, participants representing the demographic mix in the U.S. will receive doses of Naturlose, three times a day, to test its ability to treat Type 2 diabetes while an equal number of subjects will receive a placebo. A minimum of 330 participants must complete the trial in accord with the current protocol (165 using Naturlose and 165 using a placebo).

The Company anticipates that the earliest the Phase 3 trial could be completed is mid-2010, but acknowledges that many factors including, but not limited to, the time to complete the trial, could result in further delays. If successful, FDA approval would not likely be received before mid-2011 at the earliest. The Company currently expects to obtain interim analysis results from the Phase 3 trial during mid-2009, which may allow the Company some preliminary insight as to the efficacy of Naturlose as a treatment for Type 2 diabetes.

Dose Range Trial

Biospherics is also conducting a six-month Phase 2 Dose Range trial to evaluate whether lower doses of Naturlose are effective in treating Type 2 diabetes. The trial will evaluate three different daily doses which are lower than the daily dose currently in use in the Phase 3 trial. The Dose Range trial is expected to be completed in 2009.

Administration of the Phase 3 and Dose Range Trials

The trials were initially commenced in both Australia and in the United States. In 2007, the Company terminated the Australian operations and expanded the United States portion of the trial. However, patient recruitment in the U.S. proceeded slower than expected. To enhance enrollment and retention, the Company successfully petitioned the FDA to eliminate the need for pre-mixed liquid solutions for the delivery of study medicine. The solutions were replaced with powder sachets, which are more convenient for the trial participants, and therefore improved patient retention. Beginning in October 2008, Biospherics also started conducting a portion of the Phase 3 and Dose Range trials in India where patient retention is greater than in the U.S. Spherix signed an agreement with a Contract Research Organization (CRO) in July 2008 to oversee the work of two India CROs hired to execute the trials in India. These changes have been successful in enhancing recruitment and compliance in the trials. The Company expects that the Phase 2 Dose Range trial likely will be completed in 2009 and the Phase 3 trial likely will be completed by mid-2010, based on the current enrollment and retention numbers.

Manufacturing

Biospherics does not own or operate its own manufacturing facilities. To date, we have acquired tagatose for use in the trials from Arla Foods Ingredients amba ("Arla"), our food and beverage use licensee. However, Arla has

discontinued manufacture of tagatose. In 2008, the Company signed letters of intent with Inalco, S.p.A., a manufacturer capable of providing Biospherics with batches of pharmaceutical grade tagatose for submission to the Drug Master File (DMF) in support of the planned New Drug Application (NDA) submission. Biospherics is now using both Inalco and Arla tagatose in the Phase 3 trial in an effort to satisfy one of FDA's requirements. Successfully bridging the drug from each source is a critical step in achieving FDA approval.

Market Research

The Company has contracted with two market consulting firms to analyze the competitive situation in the diabetes market and generate forecasts to allow Biospherics to evaluate market segment opportunities and the impact of Medicaid, government initiatives, and third party payers on the diabetes therapeutic category. Primary market research is being conducted to evaluate the impact of formulation types, size and packaging on sales in the diabetes therapeutic category.

Plan for Commercialization of Naturlose

The Company believes it has sufficient resources to complete the current Phase 3 trial, but does not have sufficient resources to prepare, submit and pursue the FDA NDA and if approved, to manufacture and market Naturlose as a Type 2 diabetes drug. The Company is therefore applying its resources to continue the Phase 3 and Dose Range trials and to explore the manufacturing and marketing issues with a goal to market, sell and/or license Naturlose to a pharmaceutical or other company which would complete the commercialization. To date, the Company has not had, and does not expect to have, any meaningful offers until the efficacy of Naturlose has been demonstrated further.

Continued progress on the clinical trial of Naturlose as a treatment of Type 2 diabetes and on the other initiatives described above is dependent upon many factors including, but not limited to, the Company having sufficient funds and resources. The total cost of completing the Phase 3 trial is difficult to determine and can be affected by a number of factors, including completion of the trials in a timely manner. Although it cannot be certain, the Company's current funds on hand may be sufficient for it to complete the trial and are believed to be sufficient to meet all of the Company's short-term obligations. Additional funds may be required if the Phase 3 trials are further delayed, and will likely be required to engage in any substantial directed marketing activities.

Food and Beverage Use

In 1997, and through a subsequent amendment, the world-wide right to sell tagatose for food and beverage uses, and the right to manufacture tagatose for all uses, was licensed to Arla (formerly MD Foods Ingredients amba, "MDFI") of Denmark. Arla has not been successful in generating any substantial market for tagatose, Arla has ceased manufacturing tagatose, and the Company has received no meaningful royalties from Arla under the license agreement.

Biospherics revenue from royalties accounted for 1% of the Company's total revenue from continuing operations in 2008.

Health Sciences

In July 2007, the Company entered into the Health Sciences business when Claire L. Kruger, CEO and COO, joined the Company in advance of the anticipated sale of the Company's wholly-owned subsidiary, InfoSpherix Incorporated. 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.

During 2008 and 2007, Health Sciences provided services to 16 and 10 companies, respectively. 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. 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 the regulatory services of the Company.

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 Phase 3 clinical trial of Naturlose for Biospherics.

Health Sciences revenue accounted for 99% of the Company's total revenue in 2008.

InfoSpherix Incorporated

On August 15, 2007, the Company sold InfoSpherix. Accordingly, the operations of InfoSpherix are reported in the accompanying financial statements as discontinued operations in the Consolidated Statement of Operations, and the assets held for sale of the discontinued segment are separately identified in the Company's Consolidated Balance Sheet.

InfoSpherix professionals designed and operated contact centers, websites, and field kiosks providing information management and materials to the public on various socially beneficial subjects, as well as other information services, such as reservations and tourism.

Government Contracts

Following the sale of InfoSpherix, the Company is no longer engaged in the performance of government contracts.

Industry Segments

See Note 13, "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 2008 and 2007, 99% and 93% of the Company's revenue was generated from the Health Sciences business, respectively. Revenue from three customers accounted for 38%, 14% and 14% of the Company's revenue in 2008 and, 39%, 22% and 15% in 2007. No other single customer accounted for 10 percent or more of consolidated revenue. The loss of any of these customers could have a material effect on the Company taken as a whole if not replaced.

Patents and Trademarks

The Company has established a worldwide patent position for tagatose and Naturlose. These patents are detailed in the following table:

| Patent No. | Patent Title | Issue Date | Expiration Date |
|-------------------|--|------------|-----------------|
| Canada 2,077,257* | Process for Manufacturing D-Tagatose | 2/19/02 | 1/7/11 |
| Finland 106861* | Process for Manufacturing D-Tagatose | 4/30/01 | 1/7/11 |
| Japan 3,120,403* | Process for Manufacturing D-Tagatose | 10/20/00 | 1/7/11 |
| Korea 190671* | Process for Manufacturing D-Tagatose | 1/21/99 | 1/7/11 |
| EPO 0 518 874* | Process for Manufacturing D-Tagatose | 5/15/96 | 1/7/11 |
| U.S. 5,447,917 | D-Tagatose as Anti-Hyperglycemic Agent | 9/5/95 | 9/5/12 |
| U.S. 5,356,879 | D-Tagatose an Anti-Hyperglycemic Agent | 10/18/94 | 2/14/12 |
| Canada 1,321,730* | D-Tagatose as a Low-Calorie Carbohydrate Sweetener and Bulking Agent | 8/31/93 | 8/31/10 |
| U.S. 5,078,796* | Process for Manufacturing D-Tagatose (Tagatate) | 1/7/92 | 7/19/09 |
| U.S. 5,002,612* | Process for Manufacturing D-Tagatose | 03/26/91 | 7/19/09 |

*Licensed to Arla Foods.

Trademarks. The Company has trademarked its names, "Spherix" and "Biospherics," and "Naturlose" for the non-food uses of tagatose.

With respect to all of its inventions, the Company has received numerous patents, including foreign issues. In addition to its patent position, the Company relies on the common law protection of such information as trade secrets and on confidentiality agreements to protect the value of these assets.

Sales Backlog

The Company's backlog as of December 31, 2008 and 2007 from the Health Sciences business was approximately \$1.2 million and \$230,000, respectively. The Company bills for its consulting services primarily on a time and material 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.

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. The Company's competitors may succeed in developing technologies and products that are more effective than any that are being developed by the Company, and that could render the Company's technology and potential products obsolete and noncompetitive. Many of these competitors have substantially greater financial and technical resources and production and marketing capabilities than the Company.

Health Sciences

Competitors of Health Sciences are numerous, including some that are much larger companies with greater 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 \$4.0 million and \$5.9 million in 2008 and 2007, respectively. These expenditures were incurred primarily in the ongoing efforts to commercialize Naturlose.

Governmental Regulation

The business activities of the Company are subject to a variety of Federal and state compliance, licensing, and certification requirements. Products such as Naturlose may not be commercially marketed 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, or IND, human clinical trials and filing and approval of a New Drug Application, or 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 an NDA approval is the requirement that the manufacturing operations conform on an ongoing basis with current Good Manufacturing Practices, or 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 EMEA 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.

Regulatory requirements and approval processes in European Union 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.

In 2008, the FDA issued a directive for diabetes trials to demonstrate that the therapy will not result in an unacceptable increase in cardiovascular risk. The Company believes the design of its Phase 3 clinical trial of Naturlose as a treatment for Type 2 diabetes meets the requirements of the FDA directive.

The Company is 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 its year ended 2007, Spherix performed an annual evaluation of the effectiveness of the Company's internal control over financial reporting and reports on management's assessment of the adequacy of those controls in its annual report on Form 10-K. An annual independent audit assessment of our internal controls will also be required beginning with the year ending 2009.

The increase in accounting related regulations over the years, particularly those governing public companies, has had the effect of increasing the Company's cost for external accounting services, from 0.3% of revenue in 1997 (\$40,000) to 25% of revenue in 2008 (\$260,000). The Company anticipates the cost of compliance is likely to further increase in 2009 with the implementation of the external audit requirements of Section 404 for non-accelerated filers.

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 the Company's financial position, results of operations, capital expenditures, cash flows or competitive position.

Employees

The Company employs 11 individuals on a full- or part-time basis. Of this total, 9 are full-time employees. The Company's employees are not currently unionized, and management believes that its relations with the Company's employees are harmonious.

Item 1A. RISK FACTORS

Any of the risk factors we describe below could severely harm our business, financial condition and operating results. The market price of our common stock could decline if one or more of these risks and uncertainties develop into actual events.

RISKS RELATED TO OUR BUSINESS

OUR SOLE DRUG CANDIDATE IS STILL IN THE EARLY STAGES OF DEVELOPMENT AND REMAINS SUBJECT TO CLINICAL TESTING AND REGULATORY APPROVAL. THIS PROCESS IS HIGHLY UNCERTAIN AND WE MAY NEVER BE ABLE TO COMMERCIALIZE NATURLOSE. We have limited our biotech efforts to attempting to commercialize Naturlose as a treatment for Type 2 diabetes. We are engaged in a Phase 3 clinical trial and are devoting nearly all of our available resources to this singular effort. If we are not successful, we will likely need to cease all operations.

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WE DO NOT HAVE THE RESOURCES TO BECOME A FULL SCALE BIOTECHNOLOGY COMPANY AND WE MAY NOT BE ABLE TO ATTRACT A NECESSARY BUYER/LICENSEE/PARTNER. We intend to continue to develop Naturlose as a viable Type 2 diabetes treatment 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 that even if we achieve them, we will attract a buyer, licensee or partner. We have limited resources and we may fully expend our funds before we are able to attract a purchaser/partner.

CLINICAL TESTS ARE LONG, EXPENSIVE AND UNCERTAIN PROCESSES. IF NATURLOSE DOES NOT RECEIVE THE NECESSARY REGULATORY APPROVALS, WE WILL BE UNABLE TO COMMERCIALIZE NATURLOSE. We have not received, and may never receive, regulatory approval for the commercial sale of Naturlose. Clinical trials are long, expensive and uncertain processes. Satisfaction of regulatory requirements typically depends on the nature, complexity and novelty of the product, and requires the expenditure of substantial resources. Data obtained from clinical trials can be interpreted in different ways, which could delay, limit or prevent regulatory approval. 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. 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 Naturlose 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 and, accordingly, may encounter unforeseen problems and delays in the approval process.

REGULATORY AUTHORITIES MAY NOT APPROVE OUR PRODUCT CANDIDATES 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 their 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 Naturlose could prevent us from ever generating meaningful revenues.

Naturlose may not be approved even if it achieves 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 Naturlose.

OUR FINANCIAL RESOURCES ARE LIMITED AND WE WILL NEED TO RAISE ADDITIONAL CAPITAL IN THE FUTURE TO CONTINUE OUR BUSINESS. WE MAY NOT BE ABLE TO OBTAIN ADDITIONAL FINANCING IF NEEDED. As of December 31, 2008, the Company had cash and cash equivalents and marketable securities of approximately \$11.3 million and expects to expend all or nearly all of this amount within the next two years. Our future capital requirements will depend on many factors, including the progress of the clinical trials and commercialization of Naturlose, as well as general and administrative costs. We will need to raise additional capital to continue our business beyond this period. The current economic downturn and its impact on the stock markets will most likely have a negative impact on our efforts to raise additional capital. 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. In addition, we have received notice from the NASDAQ Stock Market that our common stock may be delisted from the NASDAQ Markets if we fail to achieve compliance with NASDAQ's \$1.00 minimum bid price per share requirement by late October 2009. These matters involve risks and uncertainties that may prevent us

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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.

UNSTABLE MARKET CONDITIONS MAY HAVE SERIOUS ADVERSE CONSEQUENCES ON OUR BUSINESS. The recent economic downturn and market instability has 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 OF NATURLOSE ARE PROLONGED, DELAYED OR SUSPENDED, IT MAY TAKE SIGNIFICANTLY LONGER AND COST SUBSTANTIALLY MORE TO OBTAIN APPROVAL FOR OUR DRUG CANDIDATE AND ACHIEVE PROFITABILITY, IF AT ALL. We have already encountered several challenges which have delayed our Phase 3 trial. Each delay makes it more likely that we will need interim financing to complete the Phase 3 trial. We cannot predict whether we will encounter additional problems with our trial that will cause us or regulatory authorities to delay or suspend the clinical trial, or delay the analysis of data from the ongoing trial. Any of the following could delay the clinical development of Naturlose as a drug:

- 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;
- delays in enrolling patients into the trial;
- a lower than anticipated retention rate of patients in the trial;
- the need to repeat the 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 CURRENTLY RELY ON THIRD PARTIES TO CONDUCT PORTIONS OF OUR TRIAL, AND THOSE THIRD PARTIES MAY NOT PERFORM SATISFACTORILY. We rely on third parties to enroll qualified patients, conduct our trial, provide services in connection with such trial, and coordinate and oversee significant aspects of the trial. Our reliance on these third parties for 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 trial 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.

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 NATURLOSE. Our ability to develop and commercialize

Naturlose will depend in part on our ability to arrange for other parties to manufacture Naturlose 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 Arla material used in the trials, the development and commercialization of Naturlose 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 NATURLOSE. We expect to have Naturlose marketed both inside and outside of the United States. In order to market Naturlose 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 Naturlose and we must bridge the materials supplied by the manufacturer(s) to the previously supplied Arla 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 a drug which must be consumed in powder form, three times a day, and in the quantities used in our trial.

IF PHYSICIANS AND PATIENTS DO NOT ACCEPT NATURLOSE, WE MAY NOT BE ABLE TO GENERATE SIGNIFICANT REVENUES FROM PRODUCT SALES. Even if we obtain regulatory approval for Naturlose, it 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 and/or difficult administration;
- prevalence and severity of adverse side effects;
- 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 Naturlose fails to achieve market acceptance, we would not be able to generate significant revenue or achieve profitability.

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.

OUR PATENT PROTECTION MAY NOT BE SUFFICIENT TO PROTECT US. Our current use patent for Naturlose as a treatment for Type 2 diabetes expires in 2012. We are exploring the prospects of extending the life of the patent of Naturlose for up to an additional three years. In order for the Company's request for an extension to be considered, FDA approval is needed prior to the patent's expiration in 2012. There is no assurance, however, that this effort will be successful.

WE HAVE SUSTAINED LOSSES IN THE PAST AND WE MAY SUSTAIN LOSSES IN THE FUTURE. We have incurred losses from continuing operations in prior years, including 2008 and 2007. Our net losses from continuing operations before taxes for the years ended December 31, 2008 and 2007 were \$6.2 million and \$9.3 million, respectively. We expect to incur substantial losses in 2009 and thereafter until we find a purchaser/licensee. 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 BY COMPETITORS. Our competitors in the biotechnology products business are numerous. Many of our competitors have significantly greater financial, marketing and distribution resources than we do. Our competitors may succeed in developing or marketing biotechnology products that are more effective than ours.

RISKS RELATED TO OWNERSHIP OF OUR COMMON STOCK

THE PRICE OF SPHERIX'S COMMON STOCK HAS BEEN HIGHLY VOLATILE DUE TO SEVERAL FACTORS WHICH WILL CONTINUE TO AFFECT THE PRICE OF OUR STOCK. Our common stock has traded as low as \$0.20 and as high as \$1.30 between January 1, 2008 and December 31, 2008. 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 which we or our competitors make;
- developments with respect to patents or proprietary rights; and
- recent economic downturn and market instability.

OUR COMMON STOCK WILL BE DELISTED FROM NASDAQ CAPITAL MARKET SYSTEM IF WE FAIL TO COMPLY WITH CONTINUED LISTING STANDARDS. On July 21, 2008, we were advised that we were in danger of our common stock being delisted from the NASDAQ due to failing to meet the minimum \$1 per share stock price requirement. Spherix has until late October 2009 to regain compliance. The Company can achieve compliance at any time during this period if the bid price of its common stock closes at \$1.00 per share or more for a minimum of ten (10) consecutive business days. If the Company does not regain compliance with this rule by late October 2009, NASDAQ will provide notice to the Company that its common stock will be delisted from NASDAQ and the Company will have an opportunity to appeal the determination. On November 17, 2008, the stockholders of Spherix authorized a reverse split of the Company's common stock within a range of 1:5 to 1:20. Accordingly, the Board of Directors has the authority, at any time until mid-November 2009, to determine whether and when to implement a reverse stock split and the actual ratio of such a split within the 1:5 to 1:20 range. It is expected that the Board of Directors will defer a decision on the reverse stock split until the third quarter of 2009. The Company will also be delisted if its stockholders' equity falls below the \$2.5 million minimum requirement of the NASDAQ Capital Market. At December 31, 2008, the Company's shareholders' equity was \$10.4 million.

DIVIDENDS ON OUR COMMON STOCK ARE NOT LIKELY. We intend to retain future earnings, if any, in order to provide funds for use in the operation and expansion of our business and for further research and development. Accordingly, 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 WHICH COULD BE BENEFICIAL TO OUR STOCKHOLDERS. In 2001, we adopted a shareholder rights plan. 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.

INSIDERS OWN A SIGNIFICANT PORTION OF OUR COMMON STOCK, WHICH COULD LIMIT OUR STOCKHOLDERS’ ABILITY TO INFLUENCE THE OUTCOME OF KEY TRANSACTIONS. As of December 31, 2008, our officers and directors and their affiliates owned approximately 18% of the outstanding shares of our common stock. As a result, our officers and directors are able to exert considerable influence over the outcome of any matters submitted to a vote of the holders of our common stock, including the election of our Board of Directors. The voting power of these stockholders could prevent or frustrate attempts to effect a transaction that is in the best interests of the other stockholders and could also discourage others from seeking to purchase our common stock, which might depress the price of our common stock.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

The Company’s headquarters are located in Bethesda, Maryland where it leases 5,000 square feet of office space under a lease that expires March 31, 2013. The Company also leases 5,000 square feet of research lab and warehouse space for Biospherics in Annapolis, Maryland under a lease that expires June 30, 2009. Biospherics is conducting no operations at the Annapolis, Maryland facility and the Company does not expect to renew this lease. The capacity of the Bethesda facility is adequate for the Company’s current needs.

Item 3. LEGAL PROCEEDINGS

Information required by this Item 3 is included in Note 9 “Commitments and Contingencies” of the Notes to Financial Statements, included herein pursuant to Part II of this Form 10-K.

Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

A Special Meeting of Stockholders was held on November 17, 2008, where the following action was taken:

The Board of Directors was granted the authority at any time during the following twelve (12) months to effect a reverse stock split of the Company’s issued and outstanding common stock at a ratio to be designated by the Board of Directors within a range of 1:5 to 1:20 and to reduce the number of authorized shares of common stock at a corresponding ratio (the “Reverse Stock Split”). The Reverse Stock Split was ratified, with 9,473,637 shares voted in favor, 2,549,509 shares voted against, and 80,655 shares abstaining.

PART II

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

As of March 5, 2009, the number of shareholders of record of the Company’s common stock was approximately 819. 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 2008 or 2007.

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, 2008, based on the daily closing prices as reported by NASDAQ:

| | High | | Low | |
|------------------|-------------|--|------------|--|
| 1st Quarter 2008 | \$ 1.29 | | \$ 1.05 | |
| 2nd Quarter 2008 | \$ 1.15 | | \$ 0.65 | |
| 3rd Quarter 2008 | \$ 0.80 | | \$ 0.51 | |
| 4th Quarter 2008 | \$ 0.74 | | \$ 0.20 | |
| 1st Quarter 2007 | \$ 2.46 | | \$ 1.81 | |
| 2nd Quarter 2007 | \$ 2.84 | | \$ 2.15 | |
| 3rd Quarter 2007 | \$ 2.43 | | \$ 1.58 | |
| 4th Quarter 2007 | \$ 1.88 | | \$ 1.11 | |

On July 21, 2008, NASDAQ notified the Company that the bid price of the Company’s common stock for the last thirty consecutive business days had closed below the minimum \$1.00 per share required for continued listing on NASDAQ. On each of October 22, 2008, December 19, 2008 and March 24,

2009, the Company received notification from NASDAQ advising the Company that, given the continued extraordinary market conditions, NASDAQ has suspended enforcement of the minimum bid price and market value of publicly held shares continued listing requirements.

The most recent NASDAQ notice provides that all companies currently in a bid price or market value compliance period, such as Spherix, will not be subject to delisting during the suspension period and will be granted an extended compliance period. Accordingly, Spherix will have until late October 2009 to regain compliance. The Company can achieve compliance at any time during either the suspension or the extended compliance period if the bid price of its common stock closes at \$1.00 per share or more for a minimum of ten (10) consecutive business days. If the Company does not regain compliance with this rule by late October 2009, NASDAQ will provide notice to the Company that its common stock will be delisted from NASDAQ and the Company will have an opportunity to appeal the determination.

On November 17, 2008, the stockholders authorized a reverse split of the Company's common stock within a range of 1:5 to 1:20. Accordingly, the Board of Directors has the authority, at any time until mid-November 2009, to determine whether and when to implement a reverse stock split and the actual ratio of such a split within the 1:5 to 1:20 range. It is expected that the Board of Directors will defer a decision on the reverse stock split until the third quarter of 2009.

At September 30, 2008, the Company's stockholders' equity fell below the \$10 million limit required for continued listing on the NASDAQ Global Market. Accordingly, the Company transferred its listing from the NASDAQ Global Market to the NASDAQ Capital Market, which has a lower stockholders' equity limit of \$2.5 million. At December 31, 2008, the Company's stockholders' equity was \$10.4 million, with the receipt of the \$2 million escrow payment from the InfoSpherix sale in the fourth quarter of 2008 contributing to the increase. Management expects the Company's stockholders' equity will drop below \$10 million again by the end of the first quarter of 2009.

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, 2008.

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| 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 | 40,500 | \$ 2.57 | 857,700 |
| Equity compensation plans not approved by securities holders | N/A | N/A | N/A |
| Total | 40,500 | \$ 2.57 | 857,700 |

Item 6. SELECTED FINANCIAL DATA

Not applicable.

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

Overview

The Company now operates via two principal segments, Biospherics and Health Sciences. Biospherics seeks to develop one proprietary product for commercial application. Health Sciences 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 Health Sciences segment was created in July 2007, when Claire L. Kruger, CEO and COO, joined the Company. The Company organized Health Sciences to better facilitate its Biospherics efforts and to provide a modest amount of revenue during the Biospherics development efforts.

Biospherics is focused on only one potential product, Naturlose as an effective treatment for Type 2 diabetes. In April 2007, the Company commenced a Phase 3 clinical trial under a Food and Drug Administration (FDA) Investigational New Drug (IND) application process for this purpose. As a result, the Company has incurred substantial development costs and expects to continue to incur substantial development costs until completed, without any substantial corresponding revenue.

InfoSpherix provided contact center information and reservations services for government and industry. On August 15, 2007, the Company sold InfoSpherix to focus substantially all of its efforts on Biospherics. The operations of InfoSpherix are reported in the accompanying financial statements as discontinued operations.

Results of Operations—2008 Compared with 2007

Revenue and Direct Costs

Revenue and direct contract costs are primarily related to the Company's Health Sciences business, which started in July 2007 and has seen a steady growth in revenue each quarter. The consulting business generally provides 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. Engagement agreements typically provide for monthly billing and payment within thirty (30) days of receipt, and permit clients to terminate engagements at any time.

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

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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 commercialize Naturlose. We expense our research and development costs as they are incurred.

The Company's ongoing Phase 3 and Dose Range trials in the use of Naturlose for the treatment of Type 2 diabetes are the primary focus of the Biospherics division. The R&D expenditures for 2007 included start-up costs for the Phase 3 clinical trial, including approximately \$2 million for drug packaging, warehousing and shipping, and those of the same periods in 2008 consisted of costs related to both the Phase 3 clinical trial and a Phase 2 Dose Range trial.

Patient recruitment for the U.S. clinical trial was slower than the Company originally expected. To enhance enrollment and retention, the Company successfully petitioned the FDA to eliminate the need for pre-mixed liquid solutions for the delivery of study medicine. The solutions were replaced with powder sachets, which are more convenient for the trial participants, and therefore improved patient retention. In addition, beginning October 2008, the Company started conducting a portion of the Phase 3 and Dose Range trials in India where patient retention is greater than in the U.S. In July 2008, the Company signed an agreement with a Contract Research Organization (CRO) to oversee the work of two India CROs hired to execute the trials in India. These changes have been successful in enhancing recruitment and compliance in the trial. The Company expects that the Dose Range trial will likely be completed in 2009 and the Phase 3 trial will likely be completed in mid-2010, based on the current enrollment and retention numbers. The Company currently expects to obtain interim analysis results from the Phase 3 trial during mid-2009, which may allow the Company some preliminary insight as to the efficacy of Naturlose as a treatment for Type 2 diabetes.

Selling, General and Administrative

Our selling, general and administrative 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. The decrease between years is primarily the result of the relocation of the Company's headquarters to a smaller facility in Bethesda, Maryland, effective April 1, 2008, which decreased the Company's overhead costs.

Interest

Interest revenue in 2008 and 2007 was primarily derived from interest earned on the proceeds of the sale of the InfoSpherix subsidiary in August 2007. During 2008, the funds available for investing (cash and cash equivalents and short-term investments) decreased from \$15.8 to \$11.3 million. In addition, the average yield on investments also decreased during the course of 2008.

Income Tax

The income tax benefit (expense) is related to the sale of InfoSpherix in the third quarter of 2007 and the related release of the \$2 million escrow balance in November 2008.

Discontinued Operations

On August 15, 2007, the Company completed the sale of InfoSpherix for \$17 million (\$15 million at closing and \$2 million following a 15-month escrow period), pursuant to the Stock Purchase Agreement dated June 25, 2007. The \$15 million sale proceeds were included in the gain on sale of the discontinued segment at the time of closing in August 2007. The \$2 million escrow balance was recorded as a gain on sale of the discontinued segment when it was realized in November 2008. The InfoSpherix segment comprised the majority of the Company's operations prior to the sale. The sale was conducted to allow Spherix to focus substantially all of its efforts on Biospherics.

The results of operations of the discontinued InfoSpherix segment, including the costs to sell the segment, are as follows:

| | 2008 | 2007 |
|---|---------------------|---------------------|
| Revenue | \$ — | \$ 15,371,000 |
| Direct cost and operating expense | — | (13,202,000) |
| Selling, general and administrative expense | — | (1,749,000) |
| Interest revenue | 70,000 | 170,000 |
| Interest expense | — | (21,000) |
| Other income | — | — |
| Gain on sale of segment | 2,000,000 | 8,567,000 |
| Income from discontinued operations before taxes | \$ 2,070,000 | \$ 9,136,000 |

Sales Backlog

The Company's backlog as of December 31, 2008 and 2007, from the Health Sciences business was approximately \$1.2 million and \$230,000, respectively. The Company bills for its consulting services primarily on a time and material 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. A valuation allowance is required when it is more likely than not that all or a portion of a deferred tax asset will not be realized. 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 September 2006, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards No. 157, "Fair Value Measurements" ("SFAS 157"). SFAS 157 defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. SFAS 157 became effective January 1, 2008, with the exception of nonfinancial assets and nonfinancial liabilities. The effective date of these items has been deferred to fiscal years beginning after November 15, 2008. The adoption of the portions of SFAS 157 that became effective January 1, 2008 did not have a material effect on our financial position, results of operations or cash flow. The adoption of SFAS 157 for nonfinancial assets and nonfinancial liabilities has not had a material effect on our financial position, results of operations or cash flows.

In February 2007, the FASB issued Statement of Financial Accounting Standards No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities" ("SFAS 159"). SFAS 159 permits entities to choose to measure many financial assets and liabilities at fair value. The fair value option may be applied, subject to certain exceptions, on an instrument by instrument basis; is irrevocable; and is applied only to entire instruments and not to portions of

instruments. SFAS 159 was effective for our fiscal year beginning January 1, 2008. The adoption of SFAS 159 did not have a material effect on our financial position, results of operations or cash flows.

In December 2007, the FASB issued Statement of Financial Accounting Standards No. 141 (revised 2007) "Business Combinations" ("SFAS 141R"). SFAS 141R establishes principles and requirements in accounting for business combinations. This Statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008.

In March 2008, the FASB issued Statement of Financial Accounting Standards No. 161, "Disclosures About Derivative Instruments and Hedging Activities - an amendment of FASB Statement No. 133" ("SFAS 161). SFAS 161 requires enhanced disclosures about an entity's derivative and hedging activities. This Statement is effective for financial statements issued for fiscal years and interim periods beginning after November 15, 2008. We do not expect the adoption of SFAS 161 to have a material effect on our financial position, results of operations or cash flows.

Liquidity and Capital Resources

Working capital as of December 31, 2008, was \$10.8 million, which represents a \$4.1 million decrease from working capital at December 31, 2007. A \$6.2 million loss from operations before taxes was partly offset by the \$2 million that was realized in November 2008 upon the receipt of the escrow balance from the 2007 sale of InfoSpherix. Expenditures for the year included approximately \$4.2 million for R&D activity and related market research costs.

Cash flow for the year ended December 31, 2008, consisted of \$6.4 million used in operating activities (including approximately \$4.2 million in R&D activity and related market research) and \$7,000 provided by investing activities consisting primarily of \$1.9 million used to purchase short-term investments and \$2.1 million provided from the release of the escrow balance and the interest revenue related to the 2007 sale of the InfoSpherix subsidiary.

On June 25, 2007, as part of the sale of InfoSpherix, the Company closed its bank line-of-credit. Accordingly, we are operating our Biospherics and Health Sciences efforts solely from the net proceeds we received from the sale of InfoSpherix. The newly launched Health Sciences business is not expected to generate any substantial excess cash flow in the next twelve (12) months.

Spherix expects to expend approximately \$7 million over the next year including \$5 million in costs related to the Phase 3 and Dose Range trials and other R&D and marketing activity related to the commercialization of Naturlose. The Phase 3 clinical trial is expected to be completed in mid-2010 and the Dose Range trial in 2009. The Company intends to finance the Biospherics activities principally through proceeds received from the 2007 sale of InfoSpherix and is considering raising additional funds through the sale of common stock and/or other means. While the Company completes its Phase 3 trial, it is taking other steps to prepare for commercialization of Naturlose as a treatment for Type 2 diabetes on the assumption that the trials will be successful. These steps include the Dose Range trial, exploring manufacturing alternatives and seeking marketing assistance. The Company's goal is to attract a pharmaceutical company to purchase or license the technology at the earliest practicable stage. Our preliminary marketing analysis suggests that we may increase our chances of success by engaging in some directed marketing efforts as we proceed with the Phase 3 trial.

Continued progress on the clinical trial of Naturlose as a treatment of Type 2 diabetes and on the other initiatives described above is dependent upon many factors including, but not limited to, the Company having sufficient funds and resources. To date, the Company has not had, and does not expect to have, any meaningful offers until the efficacy of Naturlose has been further established. The Company believes its current financial resources are sufficient

to complete the Phase 3 trial provided the trial is completed as expected by mid-2010, but does not believe its resources will be sufficient to then prepare, submit and pursue the FDA new drug application (NDA) or take other steps necessary to bring Naturlose to market as a Type 2 diabetes drug. Additional funds may be required if the Phase 3 trial is further delayed.

The total cost of completing the Phase 3 trial is difficult to determine and can be affected by any number of factors including, but not limited to, the time to complete the trial. No guarantee can be given that the Company will be successful in its efforts to raise additional funds and, as many of our costs are “fixed,” any additional delays in the Phase 3 trial could cause us to expend all of our funds before the trial is complete.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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

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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 subsidiary (the Company) as of December 31, 2008 and 2007, and the related consolidated statements of operations, changes in stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2008. 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 financial statements referred to above present fairly, in all material respects, the financial position of Spherix Incorporated as of December 31, 2008 and 2007, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2008 in conformity with accounting principles generally accepted in the United States of America.

/s/ GRANT THORNTON LLP

McLean, Virginia
March 27, 2009

| | | | | |
|--|-----------|--------------------|-----------|--------------------|
| Revenue | \$ | 1,025,961 | \$ | 154,698 |
| Operating expense | | | | |
| Direct costs | | 397,645 | | 54,292 |
| Research and development expense | | 4,004,565 | | 5,865,426 |
| Selling, general and administrative expense | | 3,135,310 | | 3,872,041 |
| | | <u>7,537,520</u> | | <u>9,791,759</u> |
| Loss from operations | | (6,511,559) | | (9,637,061) |
| Interest income | | 348,443 | | 378,055 |
| Interest expense | | (2,220) | | (77) |
| Other expense | | (5,994) | | — |
| | | <u>(6,171,330)</u> | | <u>(9,259,083)</u> |
| Income tax benefit | | 552,803 | | 3,408,015 |
| | | <u>(5,618,527)</u> | | <u>(5,851,068)</u> |
| Loss from continuing operations | | | | |
| Discontinued operations | | | | |
| Income from discontinued operations | | 2,070,091 | | 9,136,047 |
| Income tax expense | | (587,098) | | (4,223,353) |
| | | <u>1,482,993</u> | | <u>4,912,694</u> |
| Net loss | \$ | (4,135,534) | \$ | (938,374) |
| Net (loss) income per share, basic | | | | |
| Continuing operations | \$ | (0.39) | \$ | (0.41) |
| Discontinued operations | \$ | 0.10 | \$ | 0.35 |
| Net (loss) income per share, basic | \$ | (0.29) | \$ | (0.07) |
| Net (loss) income per share, diluted | | | | |
| Continuing operations | \$ | (0.39) | \$ | (0.41) |
| Discontinued operations | \$ | 0.10 | \$ | 0.35 |
| Net (loss) income per share, diluted | \$ | (0.29) | \$ | (0.07) |
| Weighted average shares outstanding, basic | | <u>14,342,953</u> | | <u>14,215,289</u> |
| Weighted average shares outstanding, diluted | | <u>14,342,953</u> | | <u>14,215,289</u> |

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

Spherix Incorporated
Consolidated Balance Sheets
As of December 31, 2008 and 2007

| | <u>2008</u> | <u>2007</u> |
|--|----------------------|----------------------|
| ASSETS | | |
| Current assets | | |
| Cash and cash equivalents | \$ 9,404,843 | \$ 15,839,959 |
| Short-term investments | 1,894,434 | — |
| Trade accounts receivable | 281,342 | 38,581 |
| Other receivables | 37,223 | 167,229 |
| Prepaid expenses and other assets | 282,971 | 372,242 |
| Total current assets | <u>11,900,813</u> | <u>16,418,011</u> |
| Property and equipment, net | 310,365 | 55,088 |
| Patents, net of accumulated amortization of \$38,588 and \$110,599 | 14,433 | 32,371 |
| Deposit | 35,625 | 35,625 |
| Total assets | <u>\$ 12,261,236</u> | <u>\$ 16,541,095</u> |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities | | |
| Accounts payable and accrued expenses | \$ 710,881 | \$ 1,046,537 |
| Accrued salaries and benefits | 304,756 | 362,334 |
| Income taxes payable | — | 50,738 |
| Deferred revenue | 39,347 | 15,165 |
| Total current liabilities | <u>1,054,984</u> | <u>1,474,774</u> |
| Deferred compensation | 660,000 | 609,000 |

| | | |
|--|----------------------|----------------------|
| Deferred rent | 136,736 | 6,531 |
| Total liabilities | <u>1,851,720</u> | <u>2,090,305</u> |
| Commitments and contingencies | — | — |
| Stockholders' equity | | |
| Preferred stock, \$0.01 par value, 2,000,000 shares authorized; none issued and outstanding | — | — |
| Common stock, \$0.005 par value, 50,000,000 shares authorized; 14,437,600 and 14,399,140 issued, 14,357,162 and 14,318,702 outstanding at December 31, 2008 and 2007, respectively | 72,188 | 71,996 |
| Paid-in capital in excess of par value | 27,602,486 | 27,508,418 |
| Treasury stock, 80,438 shares, at cost at December 31, 2008 and 2007, respectively | (464,786) | (464,786) |
| Accumulated deficit | (16,800,372) | (12,664,838) |
| Total stockholders' equity | <u>10,409,516</u> | <u>14,450,790</u> |
| Total liabilities and stockholders' equity | <u>\$ 12,261,236</u> | <u>\$ 16,541,095</u> |

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

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Spherix Incorporated
Consolidated Statements of Changes in Stockholders' Equity
For the years ended December 31, 2008 and 2007

| | Common Stock | | Paid-in Capital in Excess of Par | Treasury Stock | | Retained Earnings (Accumulated Deficit) | Stockholders' Equity |
|--|-------------------|------------------|--|----------------|---------------------|--|-------------------------|
| | Shares | Amount | | Shares | Amount | | |
| Balance, December 31, 2006 | 13,892,642 | \$ 69,463 | \$ 26,672,384 | 80,438 | \$ (464,786) | \$ (11,726,464) | \$ 14,550,597 |
| Issuance of common stock | | | | | | | |
| Sale of common stock in private placement, net | 442,358 | 2,212 | 755,288 | — | — | — | 757,500 |
| Stock-based compensation | 64,140 | 321 | 80,746 | — | — | — | 81,067 |
| Net income | — | — | — | — | — | (938,374) | (938,374) |
| Balance, December 31, 2007 | 14,399,140 | 71,996 | 27,508,418 | 80,438 | (464,786) | (12,664,838) | 14,450,790 |
| Stock-based compensation | 38,460 | 192 | 94,068 | — | — | — | 94,260 |
| Net loss | — | — | — | — | — | (4,135,534) | (4,135,534) |
| Balance, December 31, 2008 | <u>14,437,600</u> | <u>\$ 72,188</u> | <u>\$ 27,602,486</u> | <u>80,438</u> | <u>\$ (464,786)</u> | <u>\$ (16,800,372)</u> | <u>\$ 10,409,516</u> |

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

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Spherix Incorporated
Consolidated Statements of Cash Flows
For the years ended December 31, 2008 and 2007

| | 2008 | 2007 |
|---|--------------------|--------------------|
| Cash flows from operating activities | | |
| Net loss | \$ (4,135,534) | \$ (938,374) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Income from discontinued operations | (1,482,993) | (4,912,694) |
| Income tax benefit | (552,803) | (3,408,015) |
| Depreciation and amortization | 85,718 | 210,417 |
| Gain on sale of fixed assets | (14,701) | — |
| Patent write-off | 9,860 | 51,158 |
| Stock-based compensation | 94,260 | 81,067 |
| Changes in assets and liabilities: | | |
| Receivables | (112,755) | (205,331) |
| Prepaid expenses and other assets | 89,271 | (41,720) |
| Accounts payable and accrued expenses | (410,670) | 924,221 |
| Deferred rent | (19,795) | (149,775) |
| Deferred compensation | 51,000 | 114,000 |
| Deferred revenue | 24,182 | 15,165 |
| Net cash used in activities of continuing operations | (6,374,960) | (8,259,881) |
| Net cash used in activities of discontinued operations | (34,295) | (368,733) |
| Net cash used in operating activities | <u>(6,409,255)</u> | <u>(8,628,614)</u> |
| Cash flows from investing activities | | |
| Proceeds from the sale of subsidiary | 2,070,091 | 15,291,000 |
| Purchase of short-term investments | (1,894,434) | — |
| Purchase of property and equipment | (183,403) | (25,258) |
| Proceeds from the sales of fixed assets | 15,187 | — |

| | | |
|--|---------------------|----------------------|
| Net cash provided by investing activities of continuing operations | 7,441 | 15,265,742 |
| Net cash used in investing activities of discontinued operations | — | (1,316,588) |
| Net cash provided by investing activities | 7,441 | 13,949,154 |
| Cash flows from financing activities | | |
| Net change in book overdraft | (33,302) | 28,972 |
| Proceeds from issuance of common stock, net | — | 757,500 |
| Net cash (used in) provided by financial activities of continuing operations | (33,302) | 786,472 |
| Net cash used in financing activities of discontinued operations | — | (130,824) |
| Net cash (used in) provided by financing activities | (33,302) | 655,648 |
| Net (decrease) increase in cash and cash equivalents | (6,435,116) | 5,976,188 |
| Cash and cash equivalents, beginning of year | 15,839,959 | 9,863,771 |
| Cash and cash equivalents, end of year | \$ 9,404,843 | \$ 15,839,959 |
| Supplemental cash flow information | | |
| Interest paid | \$ 2,220 | \$ 77 |

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

Prior to August 15, 2007, the Company's principal segments of operation were InfoSpherix and Biospherics. Biospherics develops proprietary products for commercial applications. InfoSpherix provided contact center information and reservations services for government and industry. On August 15, 2007, the Company sold InfoSpherix. The sale allowed Spherix to focus substantially all of its efforts on Biospherics, where the principal focus is on the commercialization of Naturlose. The operations of InfoSpherix are reported in the accompanying financial statements as discontinued operations.

Biospherics engages in product development, notably tagatose. The Company's current focus is on the non-food use of tagatose, which we will market under the name "Naturlose". Our principal efforts have been to explore whether Naturlose is an effective treatment for Type 2 diabetes. In April 2007, the Company commenced a Phase 3 clinical trial under a Food and Drug Administration (FDA) Investigational New Drug (IND) application process for this purpose. As a result, the Company expects to incur substantial development costs for the foreseeable future, without any substantial corresponding revenue (see Note 9, "Liquidity").

In July 2007, the Company started a new Health Sciences business to provide technical and regulatory consulting services to biotechnology and pharmaceutical companies, as well as aiding the Company's own R&D activities.

Basis of Presentation

The consolidated financial statements have historically included the accounts of both Spherix Incorporated and InfoSpherix Incorporated (collectively, the "Company"). All intercompany balances and transactions have been eliminated.

On August 15, 2007, the Company sold InfoSpherix. Accordingly, the operations of InfoSpherix are reported in the accompanying financial statements as discontinued operations in the Consolidated Statement of Operations. In July 2007, Spherix entered into the Health Sciences business to provide technical and regulatory consulting services to biotechnology and pharmaceutical companies, as well as aiding the Company's own R&D activities.

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. Accordingly, actual results could differ from those estimates and assumptions.

Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. At December 31, 2008, the Company had approximately \$9.4 million invested in funds with a maturity of three months or less, which are included as cash and cash equivalents. The Company maintains cash balances at several banks. Accounts at each institution are insured by the Federal Deposit Insurance Corporation up to \$250,000. At December 31, 2008, the Company's cash and cash equivalent in excess of the FDIC limits was \$8.9 million.

Short-term Investments

The Company's short-term investments consist of investments in debt securities, which mature in one year or less, and are valued at amortized cost, which approximates fair value.

Spherix Incorporated
Notes to Consolidated Financial Statements

Concentrations

During 2008 and 2007, revenue from three Health Sciences clients accounted for 66% and 86% of the Company's total revenue.

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 lesser 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 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 Statement 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 lesser of the life of the patent or the projected sales period of the product or process.

Revenue Recognition

Revenue is recognized when services have been rendered 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 as deliverables or milestones are completed. 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.

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.

Research and Development Costs

Research and development costs are charged to operations as incurred.

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.

Spherix Incorporated
Notes to Consolidated Financial Statements

The Company's policy is to recognize interest and penalties on tax liabilities as interest expense. At December 31, 2008 and 2007, the Company had no unrecognized income tax benefits and recognized no interest or penalties on income tax liabilities.

Discontinued Operations

On August 15, 2007, the Company completed the sale of InfoSpherix for \$17 million (\$15 million at closing and \$2 million following a 15-month escrow period), pursuant to the Stock Purchase Agreement dated June 25, 2007. The \$15 million sale proceeds were included in the gain on sale of the discontinued segment at the time of closing in August 2007. The \$2 million escrow balance was recorded as a gain on sale of the discontinued segment and realized in November 2008. The InfoSpherix segment comprised the majority of the Company's operations prior to the sale. The sale was conducted to allow Spherix to focus substantially all of its efforts on Biospherics, with the principal focus on the commercialization of Naturlose.

The results of operations of the discontinued InfoSpherix segment, including the costs to sell the segment, are as follows:

| | 2008 | 2007 |
|---|---------------------|---------------------|
| Revenue | \$ — | \$ 15,371,000 |
| Direct cost and operating expense | — | (13,202,000) |
| Selling, general and administrative expense | — | (1,749,000) |
| Interest revenue | 70,000 | 170,000 |
| Interest expense | — | (21,000) |
| Other income | — | — |
| Gain on sale of segment | 2,000,000 | 8,567,000 |
| Income from discontinued operations before taxes | \$ 2,070,000 | \$ 9,136,000 |

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 Sheet, approximate their carrying value given their short maturities.

Accounting for Stock-Based Compensation

Effective January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123(R) "Share-Based Payment" (FAS 123R), which requires the measurement of all employee share-based payments to employees, including grants of employee stock options, using a fair-value based method and the recording of such expense in the consolidated statement of operations. The Company uses a Black-Scholes option pricing model to value stock options. For the years ended December 31, 2008 and 2007, the Company recognized \$13,000 and \$24,000, respectively, in stock based compensation expense relating to 59,000 stock options awarded in February 2006 and \$81,000 and \$57,000 related to the issuance of restricted stock (see Note 8, "Stockholders' Equity").

Net Income (Loss) Per Share

Basic net income (loss) per common share has been computed by dividing net income (loss) by the weighted-average number of common shares outstanding during the year. Diluted net income per common share is computed by dividing net income by the weighted-average number of common shares outstanding with an assumed increase in common shares outstanding for common stock equivalents. At December 31, 2008, the Company had outstanding 40,500 options, none of which were assumed likely to be exercised because the fair market price is below the exercise price. Diluted net loss per common share has been computed by dividing net loss by the weighted-average number of

Spherix Incorporated

Notes to Consolidated Financial Statements

common shares outstanding without an assumed increase in common shares outstanding for common stock equivalents, as common stock equivalents are antidilutive.

New Accounting Pronouncements

In September 2006, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards No. 157, "Fair Value Measurements" ("SFAS 157"). SFAS 157 defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. SFAS 157 became effective January 1, 2008, with the exception of nonfinancial assets and nonfinancial liabilities. The effective date of these items has been deferred to fiscal years beginning after November 15, 2008. The adoption of the portions of SFAS 157 that became effective January 1, 2008 did not have a material effect on our financial position, results of operations or cash flow. We do not expect the adoption of SFAS 157 for nonfinancial assets and nonfinancial liabilities to have a material effect on our financial position, results of operations or cash flows.

In February 2007, the FASB issued Statement of Financial Accounting Standards No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities" ("SFAS 159"). SFAS 159 permits entities to choose to measure many financial assets and liabilities at fair value. The fair value option may be applied, subject to certain exceptions, on an instrument by instrument basis; is irrevocable; and is applied only to entire instruments and not to portions of instruments. SFAS 159 was effective for our fiscal year beginning January 1, 2008. The adoption of SFAS 159 did not have a material effect on our financial position, results of operations or cash flows.

In December 2007, the FASB issued Statement of Financial Accounting Standards No. 141 (revised 2007) "Business Combinations" ("SFAS 141R"). SFAS 141R establishes principles and requirements in accounting for business combinations. This Statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008.

In March 2008, the FASB issued Statement of Financial Accounting Standards No. 161, "Disclosures about Derivative Instruments and Hedging Activities - an amendment of FASB Statement No. 133" ("SFAS 161"). SFAS 161 requires enhanced disclosures about an entity's derivative and hedging activities. This Statement is effective for financial statements issued for fiscal years and interim periods beginning after November 15, 2008. We do not expect the adoption of SFAS 161 to have a material effect on our financial position, results of operations or cash flows.

2. Fair Value Measurement

Effective January 1, 2008, the company adopted Statement of Financial Accounting Standards No. 157 *Fair Value Measurements*, (“SFAS 157”), to value its financial assets measured at fair value. At December 31, 2008, the Company had no financial liabilities.

The following table presents the Company’s financial assets measured at fair value as of December 31, 2008:

| Description | Fair Value Measurement Using | | | |
|-----------------|------------------------------|-------------------------|----------------------|------------------------|
| | Fair Value at Dec. 31, 2008 | Quoted Market Prices(1) | Observable Inputs(2) | Unobservable Inputs(3) |
| Debt securities | \$ 1,890,000 | \$ 1,890,000 | \$ — | \$ — |

(1) The highest level of fair value input and represents inputs to fair value from quoted prices in active markets for identical assets and liabilities to those being valued.

(2) Directly or indirectly observable inputs, other than quoted prices in active markets, for the assets or liabilities being valued including but not limited to, interest rates, yield curves, principal-to-principal markets, etc.

(3) Lowest level of fair value input because it is unobservable and reflects the Company’s own assumptions about what market participants would use in pricing assets and liabilities at fair value.

An associated pronouncement, SFAS No. 159 *The Fair Value Option for Financial Assets and Financial Liabilities*, was also effective at the beginning of the Company’s 2008 fiscal year. The Company has elected not to

Spherix Incorporated Notes to Consolidated Financial Statements

apply the fair value option to measure any of the financial assets and liabilities on its balance sheet not already valued at fair value under other accounting pronouncements. These other financial assets and liabilities are primarily short-term investments, accounts receivable, accounts payable and debt which are reported at historical value. The fair value of these financial assets and liabilities approximate their historical value because of their short duration.

3. Allowance for Doubtful Accounts

Management regularly reviews accounts receivables for uncollectible and potentially uncollectible accounts, and when necessary establishes an allowance for doubtful accounts. An allowance for doubtful accounts from continuing operations was not deemed necessary at December 31, 2008 and 2007.

4. Property and Equipment

During 2008, the Company relocated its headquarters to a smaller facility. The increase in office furniture and equipment and the decrease in leasehold improvements are a direct result of this move. The components of property and equipment as of December 31, at cost are:

| | 2008 | 2007 |
|---|------------|-----------|
| Computers | \$ 14,000 | \$ 12,000 |
| Office furniture and equipment | 187,000 | 94,000 |
| Leasehold improvements | 283,000 | 549,000 |
| Total cost | 484,000 | 654,000 |
| Accumulated depreciation and amortization | (174,000) | (599,000) |
| Property and equipment, net | \$ 310,000 | \$ 55,000 |

The Company’s depreciation expense for the years ended December 31, 2008 and 2007 was \$78,000 and \$187,000, respectively. In 2008, lease incentives under the Bethesda facility lease provided for \$150,000 of leasehold improvements.

5. Patents and Intangible Assets

The Company’s amortization expense for the years ended December 31, 2008 and 2007 was \$8,000 and \$23,000, respectively. The Company’s future amortization based on its patents and intangible assets at December 31, 2008 is as follows:

| Year | Amortization Expense |
|-------|----------------------|
| 2009 | \$ 7,000 |
| 2010 | 7,000 |
| Total | \$ 14,000 |

6. Line of Credit

On June 25, 2007, as part of the Stock Purchase Agreement to sell InfoSpherix, the Company agreed to terminate the line-of-credit with Bank of America (“the Bank”). Accordingly, the Company has closed the line-of-credit with the Bank.

7. Accounts Payable and Accrued Expenses

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

| | 2008 | 2007 |
|------------------|-------------------|---------------------|
| Accounts payable | \$ 524,000 | \$ 232,000 |
| Accrued expenses | 187,000 | 780,000 |
| Book overdraft | — | 35,000 |
| | <u>\$ 711,000</u> | <u>\$ 1,047,000</u> |

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Spherix Incorporated
Notes to Consolidated Financial Statements

8. Stockholders' Equity

Private Placements

During 2007, the Company sold 442,358 shares of common stock for an additional \$758,000 in proceeds under the July 22, 2005, Standby Equity Distribution Agreement ("SEDA"). The SEDA ended on October 12, 2007.

Restricted Stock

In August 2007, the Company granted 30,000 and 15,000 shares in restricted stock as part of the employment agreements for the Company's Chief Executive Officer and President. The fair value of the stock was \$55,800 and \$30,000, which will be recognized as compensation expense over the respective vesting periods of two and one years.

In August 2008 and 2007, the Company issued 38,460 and 19,140 shares, respectively, of restricted stock with a fair value of \$40,000 in each year to its independent Board Members, which was recognized as compensation expense at the time of issue. The fair value of the above stock awards was based on the closing market price on the date of 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 1,000,000 shares of common stock in amounts determined by the Compensation Committee of the Board of Directors through December 31, 2010. During 2008 and 2007, no stock options were granted under the Plan. At December 31, 2008, 857,700 options were available for grant under the Plan.

Activity for the two years ended December 31, 2008, for all option grants is shown below:

| | 2008 Shares | 2008 Weighted Average Exercise Price | 2007 Shares | 2007 Weighted Average Exercise Price |
|--|----------------|--|----------------|--|
| Outstanding at beginning of year | 216,800 | \$ 7.36 | 501,100 | \$ 7.11 |
| Granted | — | \$ — | — | \$ — |
| Exercised | — | \$ — | — | \$ — |
| Expired or forfeited | (176,300) | \$ 8.46 | (284,300) | \$ 6.91 |
| Outstanding at end of year | <u>40,500</u> | <u>\$ 2.57</u> | <u>216,800</u> | <u>\$ 7.36</u> |
| Options exercisable at end of year | 39,000 | | 214,550 | |
| Weighted-average fair value of options granted during the year | \$ — | | \$ — | |
| Price range of options | | | | |
| Outstanding | \$2.20-\$3.41 | | \$2.20-\$8.67 | |
| Exercised | \$ — | | \$ — | |
| Expired or forfeited | \$6.35-\$8.67 | | \$2.20-\$10.51 | |

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Spherix Incorporated
Notes to Consolidated Financial Statements

The following table summarizes information with respect to stock options outstanding at December 31, 2008:

| Range of Exercise Price | Number of Options | Weighted Average Exercise Price | Weighted Average |
|----------------------------|----------------------|---------------------------------------|---------------------|
|----------------------------|----------------------|---------------------------------------|---------------------|

| | | Outstanding at 12/31/08 | | Remaining Contractual Life |
|----|------|----------------------------|----|-------------------------------|
| \$ | 2.20 | 28,000 | \$ | 2.20 |
| \$ | 3.41 | 12,500 | \$ | 3.41 |
| | | 40,500 | | |

The following table summarizes information with respect to stock options exercisable at December 31, 2008:

| Year of Option Expiration | Number of Options | Weighted Average Exercise Price | Price Range |
|------------------------------|----------------------|---------------------------------------|-------------|
| 2010 | 12,500 | \$ 3.41 | \$ 3.41 |
| 2011 | 26,500 | \$ 2.20 | \$ 2.20 |
| All Years | 39,000 | | |

The Company used the following assumptions in the Black-Scholes calculation used to measure the fair value of stock-based compensation in accordance with SFAS 123R for stock options granted in 2006. No stock options were granted in 2008 or 2007.

| | 2006 |
|-------------------------|--------|
| Risk-free interest rate | 4.59% |
| Expected life (years) | 4 |
| Volatility | 140.9% |
| Dividend yield | 0% |

9. Liquidity

Working capital as of December 31, 2008, was \$10.8 million, which represents a \$4.1 million decrease from working capital at December 31, 2007. A \$6.2 million loss from operations before taxes was partly offset by the \$2 million that was realized in November 2008 upon the receipt of the escrow balance from the 2007 sale of InfoSpherix. Expenditures for the year included approximately \$4.2 million for R&D activity and related market research costs.

Spherix expects to expend approximately \$7 million over the next year including \$5 million in costs related to the Phase 3 and Dose Range trials and other R&D and marketing activity related to the commercialization of Naturlose. The Phase 3 clinical trial is expected to be completed in mid-2010 and the Dose Range trial in 2009. The Company intends to finance the Biospherics activities principally through proceeds received from the 2007 sale of InfoSpherix and is considering raising additional funds through the sale of common stock and/or other means. While the Company completes its Phase 3 trial, it is taking other steps to prepare for commercialization of Naturlose as a treatment for Type 2 diabetes on the assumption that the trials will be successful. These steps include the Dose Range trial, exploring manufacturing alternatives and seeking marketing assistance. The Company's goal is to attract a pharmaceutical company to purchase or license the technology at the earliest practicable stage. Our preliminary marketing analysis suggests that we may increase our chances of success by engaging in some directed marketing efforts as we proceed with the Phase 3 trial.

Continued progress on the clinical trial of Naturlose as a treatment of Type 2 diabetes and on the other initiatives described above is dependent upon many factors including, but not limited to, the Company having sufficient funds and resources. To date, the Company has not had, and does not expect to have, any meaningful offers until the efficacy of Naturlose has been further established. The Company believes its current financial resources are sufficient to complete the Phase 3 trial provided the trial is completed as expected by mid-2010, but does not believe its resources

Spherix Incorporated Notes to Consolidated Financial Statements

will be sufficient to then prepare, submit and pursue the FDA new drug application (NDA) or take other steps necessary to bring Naturlose to market as a Type 2 diabetes drug. Additional funds may be required if the Phase 3 trial is further delayed.

The total cost of completing the Phase 3 trial is difficult to determine and can be affected by any number of factors including, but not limited to, the time to complete the trial. No guarantee can be given that the Company will be successful in its efforts to raise additional funds and, as many of our costs are "fixed," any additional delays in the Phase 3 trial could cause us to expend all of our funds before the trial is complete.

10. Income Taxes

Income tax from continuing operations for 2008 and 2007 was as follows:

| | 2008 | 2007 |
|--|------------|--------------|
| U.S. Federal income tax benefit | \$ 465,000 | \$ 3,434,000 |
| State and local income tax benefit (expense) | 88,000 | (26,000) |
| Total income tax benefit | \$ 553,000 | \$ 3,408,000 |
| | 2008 | 2007 |
| Current income tax benefit | \$ 553,000 | \$ 3,437,000 |
| Deferred income tax expense | — | (29,000) |
| Total income tax benefit | \$ 553,000 | \$ 3,408,000 |

The tax effects of significant temporary differences representing deferred tax assets as of December 31, 2008 and 2007 are as follows:

| | 2008 | 2007 |
|---------------------------------|-------------|-------------|
| Property and equipment | \$ (70,000) | \$ 140,000 |
| Deferred rent | 54,000 | 2,000 |
| Accrued vacation | 19,000 | 4,000 |
| Tax credit | 82,000 | 90,000 |
| Deferred compensation | 305,000 | 260,000 |
| Net operating loss carryforward | 8,001,000 | 5,908,000 |
| Accrued bonus | — | 45,000 |
| Stock based compensation | 27,000 | 42,000 |
| Other | 1,000 | (1,000) |
| | 8,419,000 | 6,490,000 |
| Valuation allowance | (8,419,000) | (6,490,000) |
| Deferred tax asset | \$ — | \$ — |

At December 31, 2008 and 2007, the Company had net operating loss carry forwards for U.S. federal income tax purposes of approximately \$18.7 million and \$14.0 million, respectively, which will begin to expire in 2019. At December 31, 2008 and 2007, the Company had net operating loss carry forwards for state income tax purposes of approximately \$30.5 million and \$25.9 million, respectively, which will begin to expire in 2019. 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.

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Spherix Incorporated Notes to Consolidated Financial Statements

Reconciliation between actual tax expenses and taxes computed at the statutory Federal rate of 34 percent for 2008 and 2007 are as follows:

| | 2008 | 2007 |
|--|--------------|--------------|
| U.S. Federal income tax benefit at the statutory rate of 34% | \$ 2,432,000 | \$ 3,148,000 |
| Effect of permanent differences | (25,000) | 370,000 |
| State income taxes (expense) benefit, net of federal tax benefit | (39,000) | 434,000 |
| Other | 112,000 | 16,000 |
| Change in valuation allowance | (1,928,000) | (560,000) |
| Income tax benefit | \$ 552,000 | \$ 3,408,000 |

Tax Uncertainties

Effective January 1, 2007, the Company adopted the provisions of FASB Interpretation No. 48 ("FIN 48"), Accounting for Uncertainty in Income Taxes, an interpretation of FASB Statement No. 109 ("SFAS"). The interpretation prescribes recognition and measurement parameters for the financial statement recognition and measurement of tax positions taken or expected to be taken in the Company's tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. The amount recognized is measured as the largest amount of benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement. The Company recognized no adjustments related to the implementation of FIN 48. At December 31, 2008 and 2007, the Company had no material unrecognized income tax benefits and recognized no interest or penalties on income tax liabilities.

The Company's policy is to recognize interest and penalties on tax liabilities as interest expense. It is anticipated that the Company's unrecognized tax benefits will not change in the next 12 months.

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 2004, except for pre-2004 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.

11. Commitments and Contingencies

Government Contracts

Following the sale of InfoSpherix, the Company is no longer engaged in the performance of government contracts.

Leases

Related to the sale of InfoSpherix, Spherix signed a lease termination agreement for the Beltsville office and subsequently signed a lease agreement for office space in Bethesda, Maryland. In 2007, a termination expense of \$475,000 less \$105,000 from the elimination of deferred rent was recorded as a cost of discontinued operations. The Company also adjusted the estimated useful life on leasehold improvements to reflect the shorter lease period.

The Company has commitments under operating leases through 2013 relating to its administrative offices in Bethesda, Maryland and its research lab and administrative office in Annapolis, Maryland.

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Spherix Incorporated
Notes to Consolidated Financial Statements

Future minimum rentals as of December 31, 2008, under non-cancelable leases are as follows:

| <u>Year Ending December 31,</u> | <u>Operating Leases</u> |
|---------------------------------|-----------------------------|
| 2009 | 192,000 |
| 2010 | 150,000 |
| 2011 | 155,000 |
| 2012 | 159,000 |
| 2013 | 40,000 |
| | <u>\$ 696,000</u> |

Some of the Company's building leases contain step rent provisions, capital improvement funding, or other tenant allowances. Minimum rental payments including allowances on such leases is recognized on a straight-line basis over the term of the leases. 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 \$244,000 and \$455,000 for the years 2008 and 2007, 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 has 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, 2008, the Company's liability for both Dr. and Mrs. Levin was estimated to be \$500,000 for the lifetime payments and \$250,000 for funding the long-term lifetime healthcare and health insurance policies based on actuarially determined amounts. The non-current portion of these amounts is reported on the accompanying balance sheet as deferred compensation. During 2008 and 2007, the Company paid Dr. and Mrs. Levin a combined total of \$123,000 and \$50,000 in post-retirement benefits.

Dr. and Mrs. Levin have agreed to serve as consultants to the Company on an as-needed basis, at a specified daily rate. No consulting payments were made to the Levins during 2008 or 2007.

12. Employee Benefit Plans

Effective January 1, 1990, the Company established 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 \$9,000 and \$110,000 in 2008 and 2007, respectively.

13. 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. Following the sale of the InfoSpherix subsidiary on August 15, 2007, the Company operated via two principal segments, Biospherics and Health Sciences. Biospherics develops proprietary products for commercial applications. Health Sciences business provides technical and regulatory consulting services to biotechnology and pharmaceutical companies, as well as aiding the Company's own R&D activities.

Spherix Incorporated
Notes to Consolidated Financial Statements

Financial information by business segment for the years ended December 31, 2008 and 2007 is summarized below:

| | | <u>Year Ended December 31,</u> | |
|---|----------------------------|--------------------------------|--------------------|
| | | <u>2008</u> | <u>2007</u> |
| Revenues | Health Sciences | \$ 1,012,000 | \$ 144,000 |
| | Biospherics | 14,000 | 11,000 |
| | Total revenues | <u>\$ 1,026,000</u> | <u>\$ 155,000</u> |
| Operating Income (Loss) and Loss Before Income Taxes | Health Sciences | \$ 433,000 | \$ 34,000 |
| | Biospherics | (4,164,000) | (5,898,000) |
| | General and administration | (2,780,000) | (3,773,000) |
| | Total operating loss | <u>(6,511,000)</u> | <u>(9,637,000)</u> |
| | Interest income | 348,000 | 378,000 |

| | | | |
|--------------------------------------|---|-----------------------|-----------------------|
| | Interest expense | (2,000) | — |
| | Other expense | (6,000) | — |
| | Loss from continuing operations before income taxes | <u>\$ (6,171,000)</u> | <u>\$ (9,259,000)</u> |
| Identifiable Assets | Health Sciences | \$ 296,000 | \$ 85,000 |
| | Biospherics | 21,000 | 89,000 |
| | General corporate assets | 11,944,000 | 16,367,000 |
| | Total assets | <u>\$ 12,261,000</u> | <u>\$ 16,541,000</u> |
| Capital Expenditures | Health Sciences | \$ — | \$ — |
| | Biospherics | — | 10,000 |
| | General corporate assets | 333,000 | 15,000 |
| | Total capital expenditures | <u>\$ 333,000</u> | <u>\$ 25,000</u> |
| Depreciation and Amortization | Health Sciences | \$ — | \$ — |
| | Biospherics | 5,000 | 19,000 |
| | General corporate assets | 81,000 | 191,000 |
| | Total depreciation and amortization | <u>\$ 86,000</u> | <u>\$ 210,000</u> |

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 43% and 24% of that segment's revenue for 2008 and 2007.

Biospherics is concentrating all of its efforts on the Phase 3 clinical trial of its most promising product, "Tagatose" (also known as "Naturlose") as a treatment of Type 2 diabetes in humans. This product is in the development stage and will require substantial additional investment to bring to market.

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.

14. Subsequent Events

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 now in the name of Spherix Consulting, Inc. and the Company's patents and other assets and operations are in the process of being transferred into

Spherix Incorporated Notes to Consolidated Financial Statements

the name of Biospherics Incorporated. The subsidiaries began operations on January 1, 2009. Spherix now provides management, strategic guidance, business development, marketing and other services to its subsidiaries.

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

None.

Item 9A(T). 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, 2008.

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).

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Spherix Incorporated **Notes to Consolidated Financial Statements**

Based on our evaluation, management has concluded that its internal control over financial reporting was effective as of December 31, 2008.

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 temporary rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting during the quarter ended December 31, 2008 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. OTHER INFORMATION

There was no information required to be disclosed on Form 8-K during the fourth quarter of 2008, which was not so disclosed.

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Spherix Incorporated

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth information concerning the Spherix Board of Directors.

| <u>Name</u> | <u>Age</u> | <u>Position</u> | <u>Director Since</u> |
|-------------------------|------------|---------------------------------------|-----------------------|
| Douglas T. Brown | 55 | Director | 2004 |
| A. Paul Cox, Jr. | 71 | Chairman of the Board | 2004 |
| Claire L. Kruger | 50 | Director, and Chief Executive Officer | 2007 |
| Gilbert V. Levin | 84 | Director | 1967 |
| Robert A. Lodder, Jr. | 49 | Director, and President | 2005 |
| Aris Melissaratos | 65 | Director | 2008 |
| Robert J. Vander Zanden | 63 | Director | 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 were 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.

Mr. A. Paul Cox, Jr., PE, CMC, a Board Member since 2004, was elected Chairman of the Board in 2007. He brings sales, information technology and general corporate management experience to Spherix. He holds a B.E.S. in Electrical Engineering and an M.S. in Management Science, both from The Johns Hopkins University. Mr. Cox began his career designing special purpose digital computers, earning three patents from the Westinghouse Underseas Division, where he remained for seven years. He joined IBM Corporation, advancing through technical assignments, achieving increasing management responsibility in information systems, technical services and sales positions, and becoming Regional Marketing Rep and then Marketing Unit Manager.

Mr. Cox became President, CEO, and Board Member of Data Systems Corporation for nine years until selling the company to a division of ADP. He became Chairman and CEO of the Codema Corporation, a management consulting company. He was then recruited by Standard Register as its Corporate Vice President and General Manager of their business and equipment division. Now Principal of his own Asset Protection Company, Mr. Cox has served on various educational, industrial, civic and charitable boards. 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. Gilbert V. Levin founded Spherix Incorporated in 1967 and has served the Company in a variety of capacities since incorporation. He served as Director of Science and Technology until his retirement in August 2008. Dr. Levin previously served in the public health departments of Maryland, California, and the District of Columbia and, subsequently, as a research scientist and corporate official. Among his inventions are low-caloric sweeteners; biological nutrient removal (BNR) for municipal wastewater, rapid detection and identification of microorganisms; and the

Labeled Release life detection experiment that landed on Mars in 1976 aboard NASA's Viking Mission. He holds a Bachelor's, Master's, and a Ph.D., all from The Johns Hopkins University, where he also served on its Board of Trustees and presently serves on its National Advisory Council for the Whiting School of Engineering. Dr. Levin was recently appointed Adjunct Professor, Arizona State University, Beyond: Center for Fundamental Concepts in Science. He is not now, nor has he ever been, a director of a public company other than Spherix. Dr. Levin has not worked for any company other than Spherix since 1967.

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 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.

Dr. Robert J. Vander Zanden, Board Member since 2004, having served in two Vice President positions with Kraft Foods International, brings a long and distinguished career in technical and business aspects of the food science industry to Spherix. Dr. Vander Zanden holds a Ph.D. in Food Science from Kansas State University, and an M.S. and B.S. in Chemistry, the latter 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 Baking Company as a Product Development Scientist, with Ralston Purina as Manager Dietary Foods R&D, with Keebler as Group Director, Product and Process Development, with Group Gamesa, a Frito-Lay Company, as Vice President, Technology, with Nabisco, as Vice President of R&D for their International Division and 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 Science and Human Nutrition at Clemson University. 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. He 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 during 2008 were Mr. Brown, Chair; Mr. Cox, 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 the NASD 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

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 | 45 | Interim CFO and Treasurer |
| Claire L. Kruger | 50 | Chief Executive Officer and Chief Operating Officer |
| Robert A. Lodder | 49 | President |

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

Mr. Robert L. Clayton was elected to the Office of Interim CFO in August 2007, and was elected Director of Finance and Treasurer in May 2005. Mr. Clayton previously served as 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.

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 2008 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 2008 and 2007 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.

Item 11. 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 the Spherix Executives to the total compensation of fourteen (14) companies identified by Equilar, Inc. to be peer companies to Spherix. The Equilar Report on Executive Compensation showed that Spherix Executives are not compensated at the same level as colleagues in peer companies. Based upon the fiscal health of Spherix, however, it was 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. All 2009 base salary increases (with few exceptions) will be kept in line with inflation. The Compensation Committee recommended to the Board the salary adjustment for the President and Chief Executive Officer of Spherix.

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The following Summary of Compensation table sets forth the compensation paid by the Company during the two years ended December 31, 2008, to all Executive Officers earning in excess of \$100,000 during any year.

Summary of Compensation

| Name and Principal Position | Year | Salary (\$) | Bonus (\$)(1) | Stock Award (\$)(2) | Option Award (\$)(3) | Non-Equity Incentive Plan Compensation (\$)(4) | Change in Pension Value and Non-Qualified Deferred Compensation Earnings (\$) | All Other Compensation (\$) | Total (\$) |
|---------------------------------|------|-------------|---------------|---------------------|----------------------|--|---|-----------------------------|------------|
| C. Kruger CEO and COO | 2008 | 186,667 | — | 18,600 | — | 76,000 | — | — | 281,267 |
| | 2007 | 72,333 | — | 26,350 | — | 33,751 | — | — | 132,434 |
| R. Lodder President | 2008 | 166,667 | — | 22,500 | — | 68,000 | — | — | 257,167 |
| | 2007 | 60,000 | — | 10,000 | — | 18,667 | — | — | 88,667 |
| R. Clayton CFO and Treasurer | 2008 | 224,625 | — | — | 940 | — | — | — | 225,565 |
| | 2007 | 150,314 | 100,000 | — | 940 | — | — | — | 251,254 |

(1) R. Clayton received a stay bonus of \$100,000 in 2007.

(2) On August 1, 2007, C. Kruger was granted 30,000 shares in restricted stock with a market price on the date of grant of \$1.86. The restricted stock vested in equal amounts of 10,000 shares on August 1, 2007 and August 1, 2008, and the remaining 10,000 will vest on August 1, 2009. On August 16, 2007, R. Lodder was granted 15,000 shares in restricted stock with a market price of the date of grant of \$2.00. The restricted stock vested in equal amounts of 7,500 shares on March 1, 2008 and September 1, 2008.

(3) On February 17, 2006, R. Clayton was granted stock options for 2,000 shares, respectively. Information regarding forfeiture and assumptions made in the valuation are disclosed in Note 8.

Outstanding Equity Awards at Fiscal Year-End

| Name | Option Awards | | | | Stock Awards | |
|------------|---|---|----------------------------|------------------------|---|--|
| | 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) | 4,600 |
| R. Lodder | — | — | — | — | — | — |
| R. Clayton | 1,000 | 1,000(1) | \$ 2.20 | 2/15/2011 | — | — |

(1) Will vest in equal installments on 2/16/2009 and 2/16/2010.

(2) Will vest on 8/1/2009.

Potential Payment Upon Termination or Change in Control

The only commitment we have regarding payments upon termination of employment are the commitments to Dr. and Mrs. Levin, each of whom has retired as an employee of the Company. On July 2, 2008, the Company entered into a Letter Agreement confirming and clarifying certain matters regarding the retirements of Dr. and Mrs. Levin. This agreement provides the following continuing post-employment benefits:

- Lifetime quarterly payments of \$12,500 to each of Dr. Levin and his wife;
- Up to \$2,000 per day for any consulting services requested by the Company;
- Office space and secretarial support at the Company's headquarters and at the Biospherics office location for a period of three (3) years;
- Free use of cell phones and computers for a period of three (3) years;
- Lifetime long-term care and health insurance for Dr. Levin and his wife.

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Unless otherwise agreed by the Board of Directors, the named Executive Officers 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 |

No named Executive Officer has any commitment for payments upon a change of control of the Company.

Director Compensation

| Name | Fees Earned or Paid in Cash (\$) | Stock Awards (\$) | All Other Compensation (\$) | Total (\$) |
|-------------------------|----------------------------------|-------------------|-----------------------------|------------|
| Douglas T. Brown | 25,000 | 10,000 | — | 35,000 |
| A. Paul Cox, Jr. | 26,000 | 10,000 | — | 36,000 |
| George C. Creel | 6,000 | — | — | 6,000 |
| Aris Melissaratos | 17,000 | 10,000 | — | 27,000 |
| Robert J. Vander Zanden | 26,000 | 10,000 | — | 36,000 |
| Gilbert V. Levin | — | — | * | * |

* Under employment agreements with Dr. Gilbert V. Levin and Mrs. M. Karen Levin, the Company's founders, the Company has 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, 2008, the Company's liability for both Dr. and Mrs. Levin was estimated to be \$500,000 for the lifetime payments and \$250,000 for funding the long-term lifetime healthcare and health insurance policies based on actuarially determined amounts. The non-current portion of these amounts is reported on the accompanying balance sheet as deferred compensation. During 2008 and 2007, the Company paid Dr. and Mrs. Levin a combined total of \$123,000 and \$50,000 in post-retirement benefits. In addition, Dr. Levin also received \$87,000 and \$125,000 in salaries during 2008 and 2007, respectively. Dr. Levin continues to serve as a member of the Board of Directors.

Non-employee directors of Spherix Incorporated ("Spherix") receive the following annual compensation for service as a member of Spherix:

| | | |
|------------------------|-----------|---|
| Annual Retainer | \$ 5,000 | To be paid in cash at the first meeting of the term. |
| Stock Awards | \$ 10,000 | To be calculated by dividing \$10,000 by the closing stock price the day the Stock Awards are granted. The shares will be granted upon approval of the Board; however, the shares will be restricted and instructions will be given to the stock transfer agent that the shares may not be transferred until the one year anniversary of the Board Member's departure from the Board. |
| 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 |

Additional Retainer \$ 1,000 Chairman of the relevant Committee. Members must be on-line to be paid.
To be paid to the Chairman of the Audit Committee.

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 December 31, 2008. Except for Dr. Levin and his wife, no person is known by the Company to own beneficially more than 5% of the outstanding Common Stock. The ownership of Dr. Levin is detailed below.

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 | Gilbert V. Levin | 2,419,307(1) (2) | 16.9% |
| Common | Douglas T. Brown | 39,652(2) | * |
| Common | A. Paul Cox, Jr. | 30,652(2) | * |
| Common | Robert J. Vander Zanden | 30,652(2) | * |
| Common | Robert A. Lodder, Jr. | 27,852(2) | * |
| Common | Claire L. Kruger | 20,000(2) | * |
| Common | Aris Melissaratos | 9,615(2) | * |
| Common | Robert L. Clayton | 1,000(2) | * |
| Common | All Executive Officers and Directors as a Group | 2,578,730(2) | 18.0% |

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

(1) Includes shares owned by M. Karen Levin.

(2) Included in the number of shares beneficially owned by G.V. Levin, D.T. Brown, A.P. Cox, R.J. Vander Zanden, R.A. Lodder, C.L. Kruger, A. Melissaratos, R.L. Clayton and All Executive Officers and Directors as a Group are 0, 7,500, 7,500, 7,500, 5,000, 0, 0, 1,000, and 28,500 shares, respectively, which such persons have a right to acquire within 60 days pursuant to stock options.

As of December 31, 2008, Dr. Levin, 3170 S. Ocean Boulevard, #602S, Palm Beach, FL 33480, beneficially owned in the aggregate 2,419,307 shares of Common Stock (16.9% of the 14,318,702 outstanding shares). As principal Stockholders of the Company, Dr. Levin and his wife are considered control persons with respect to the Company.

All Directors and Executive Officers as a group, beneficial owners of 2,578,730 shares of Common Stock, owned 18.0% of the 14,318,702 outstanding shares. With the exception of Cede & Co., the holder of record for certain brokerage firms and banks, no other person is known by the Company to own beneficially more than 5% of the outstanding Common Stock of the Company.

In February 2001, the Board of Directors adopted the Rights Agreement (the "Agreement"). The 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, 2010. 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

Related Transactions

Under employment agreements with Dr. Gilbert V. Levin and Mrs. M. Karen Levin, the Company's founders, the Company has 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, 2008, the Company's liability for both Dr. and Mrs. Levin was estimated to be \$500,000 for the lifetime payments and \$250,000 for funding the long-term lifetime healthcare and health insurance policies based on actuarially determined amounts. The non-current portion of these amounts is reported on the accompanying balance sheet as deferred compensation. During 2008 and 2007, the Company paid Dr. and Mrs. Levin a combined total of \$123,000 and \$50,000 in post-retirement benefits. In addition, Dr. Levin also received \$87,000 and \$125,000 in salaries during 2008 and 2007, respectively. Dr. Levin continues to serve as a member of the Board of Directors.

Director Independence

The current Board of Directors consists of Mr. Douglas T. Brown, Mr. A. Paul Cox, Jr., Dr. Claire L. Kruger, Dr. Gilbert V. Levin, Dr. Robert A. Lodder, Jr., Mr. Aris Melissaratos, and Dr. Robert J. Vander Zanden. The Board of Directors has determined that a majority of its members, being

Messrs. Brown, Cox, Melissaratos, 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 Fees For Fiscal 2007

The following table sets forth the fees paid by the Company to Grant Thornton LLP for audit and other services in 2008 and 2007:

| | <u>2008</u> | <u>2007</u> |
|------------|-------------------|-------------------|
| Audit fees | \$ 131,000 | \$ 202,000 |
| Tax fees | — | 3,000 |
| Total | <u>\$ 131,000</u> | <u>\$ 205,000</u> |

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) 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)
- (3.1) Articles of Amendment of the Company (incorporated by reference to the Company's Proxy Statement for its May 1996, May 2000, and May 2001 annual meetings, as filed with the Commission)
- (3.2) Amended and Restated By-Laws of Spherix Incorporated (incorporated by reference to Form 8-K dated November 15, 2007)
- (10.1) Summary of Annual Compensation of Members of the Board of Directors of Spherix Incorporated (incorporated by reference to Form 8-K dated February 29, 2008)
- (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) 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)
- (10.4) Employment Agreement dated as of August 16, 2007, by and between Robert L. Clayton and the Company (incorporated by reference to Form 10-Q dated September 30, 2007)
- (10.5) Letter Agreement dated as of July 2, 2008, by and between Gilbert V. Levin, M. Karen Levin and the Company (incorporated by reference to Form 8-K filed July 8, 2008)
- (10.6) Restated Consulting Agreement dated as of November 29, 2005, by and between M. Karen Levin and the Company (incorporated by reference to Form 8-K filed December 1, 2005)
- (10.7) Restated Consulting Agreement dated as of March 23, 2004, by and between Gilbert V. Levin and the Company (incorporated by reference to Form 10-K filed March 30, 2004)
- (10.8) 1997 Stock Option Plan (incorporated by reference from the Company's Proxy Statements for its May 1998, May 2001 and May 2005 annual meetings, as filed with the Commission)
- (10.10) 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)
- (10.11) Stock Purchase Agreement by and among the Company, InfoSpherix and Active dated as of June 25, 2007 (incorporated by reference from the Company's Schedule 14A as filed with the Securities and Exchange Commission on July 16, 2007)
- (10.12) Lease termination agreement dated August 1, 2007, between Indian Creek Investors, LLC and the Company (incorporated by reference to Form 10-Q dated September 30, 2007)
- (10.13) Lease agreement dated October 4, 2007, between Elizabethan Court Associates III Limited Partnership and the Company (incorporated by reference to Form 10-Q dated September 30, 2007)
- (10.14) Agreement and License between the Company and MD Foods Ingredients Amba (incorporated by reference to Form 8-K filed October 22, 1996 and Form 10-KSB filed March 31, 1997)
- (10.15) Amendment to the September 27, 1996 Agreement and License between the Company and Arla Foods Ingredients amba (formerly MD Foods Ingredients amba (incorporated by reference to Form 8-K filed November 17, 2003)
- (23) Consent of Independent Registered Public Accounting Firm
- (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

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 27, 2009

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

Date: March 27, 2009

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 Director March 27, 2009
Douglas T. Brown

/s/ Robert L. Clayton CFO and Treasurer March 27, 2009
Robert L. Clayton

/s/ Claire L. Kruger Chief Executive Officer March 27, 2009
Claire L. Kruger
and Chief Operating Officer

/s/ Gilbert V. Levin Director March 27, 2009
Gilbert V. Levin

/s/ Robert A. Lodder, Jr. Director and President March 27, 2009
Robert A. Lodder, Jr.

/s/ Aris Melissaratos Director March 27, 2009
Aris Melissaratos

/s/ Robert J. Vander Zanden Director March 27, 2009
Robert J. Vander Zanden

Spherix Incorporated

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated March 27, 2009, with respect to the consolidated financial statements in the Annual Report of Spherix Incorporated on Form 10-K for the year ended December 31, 2008. 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 (File No. 333-44973 effective March 23, 1998, 333-79593 effective May 28, 1999, 333-32504 effective April 19, 2000, and 333-116422 effective June 14, 2004) and on Form S-2 (File No. 333-126930 effective October 4, 2005).

/s/ Grant Thornton LLP

McLean, Virginia
March 27, 2009

Spherix Incorporated

**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 annual 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 27, 2009

Spherix Incorporated

**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 annual 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 27, 2009

Spherix Incorporated

**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, 2008 (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 27, 2009

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.

Spherix Incorporated

**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, 2008 (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 27, 2009

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.
