

**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, 2004

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.)

12051 Indian Creek Court, Beltsville, Maryland 20705

(Address of principal executive offices)

Registrant's telephone number, including area code: **301-419-3900**

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

Title of each class

Name of each exchange on which registered

None

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

Common Stock (\$.005 par value per share)

(Title of class)

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 an accelerated filer (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the voting stock of the Registrant held by non-affiliates as of June 30, 2004, the last day of the Registrant's most recently completed second fiscal quarter, based on the closing price of the stock on such date was (for purposes of this determination, only our Directors and Executive Officers have been deemed affiliates):

Common Stock (Par Value \$.005) – \$48,134,504

There were 11,953,398 shares of the Registrant's Common Stock outstanding as of March 14, 2005.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Spherix Incorporated definitive Proxy Statement, to be filed with the Securities and Exchange Commission pursuant to Regulation 14A of the Securities Exchange Act of 1934 not later than 120 days after the end of the fiscal year to which this report relates, are incorporated by reference into Part III of this Form 10-K.

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 filing dated March 26, 1999, for a more detailed statement concerning forward looking statements.

Item 1. DESCRIPTION OF BUSINESS

General

Spherix Incorporated (the “Company” or “Registrant”), a Delaware corporation, was founded in 1967. The Company consists of a biotechnology division (“BioSpherix”) and an information services division (“InfoSpherix”).

The principal executive offices of the Company are located at 12051 Indian Creek Court, Beltsville, Maryland 20705, and its telephone number is (301) 419-3900. The Company’s Common Stock trades on the NASDAQ National 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 SEC.

BioSpherix Division

The BioSpherix Division is located at 304A Harry S. Truman Parkway, Annapolis, MD 21401, and its telephone number is 1-877-SPHERIX. This Division is the Company’s biotechnology research and development arm, dedicated to developing proprietary products with a view toward commercial applications. The Company has accumulated a number of patents on its products and processes.

Tagatose as a Low-Calorie, Full-Bulk Sweetener. BioSpherix has patented the use of a naturally occurring sugar, tagatose, as a low-calorie, full-bulk sweetener. It is a true sugar that looks, feels, and tastes like table sugar. Tagatose occurs in amounts too small for economic recovery in a number of foods. The Company has developed and patented a method for making tagatose from whey or lactose, an inexpensive or waste product from cheese manufacturing. The Company received two U.S. patents for its production process in 1991 and 1992, which expire July 19, 2009, and March 25, 2011, respectively. The Firm has been developing its sweetener since receiving a U.S. patent for its use and manufacture as a low-calorie sweetener in 1988, which expires August 29, 2006.

In January 1997, the Company completed a license agreement with Arla Foods Ingredients a/s (“Arla”) (formerly MD Foods Ingredients a/s, “MDFI”) of Denmark for the exclusive worldwide rights to manufacture, market, and distribute tagatose as a food and beverage ingredient in return for a non-refundable up-front payment and fees on net sales of the sugar for these purposes. Arla manufactures a wide variety of dairy products, foods and food ingredients; it ranks as one of the largest dairy products manufacturers in the world. Arla operates cheese plants producing large amounts of whey as a by-product. The License Agreement provides Arla the exclusive, world-wide rights to manufacture and sell tagatose for food uses, and the exclusive right to manufacture tagatose for non-food uses for exclusive sale to Spherix for products and resale. Spherix retains all rights to sell tagatose for drug use, and use in

drugs, including rights to the use of tagatose as a sweetener or other functional ingredient in drugs and cosmetics such as toothpaste, cough syrup, fiber laxative, and mouthwash.

To strengthen their cooperative efforts, the two companies established a Tagatose Advisory Committee to plan and review progress in bringing tagatose to its various world market sectors. The Committee consists of three Arla representatives and one Company representative. The Committee proposes strategies and actions to Arla.

A panel of experts retained by Arla declared tagatose as Generally Recognized As Safe (“GRAS”) on April 11, 2001, permitting sale of tagatose as a food ingredient in the U.S. The U.S. Food and Drug Administration (“FDA”) issued a “no objection” letter on October 25, 2001. Tagatose was recommended by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) panel in June 2001 to its many member countries for use in foods. In April 2004, tagatose was approved by the Food Standards Australia New Zealand (“FSANZ”), the food health and safety agency for Australia and New Zealand. Approval was obtained in South Korea in 2003. Arla has begun the approval process for tagatose in the European Union, Japan and other countries. The U.S. FDA approved Arla’s recommended caloric value of 1.5 kilocalories per gram, permitting labeling of products containing it as “reduced calorie.” At Spherix’s request, the right to request a smaller reduced calorie rating in the future has been reserved. Spherix believes that test data support a lower value.

Arla has formed a 50/50 joint venture with Nordzucker, a German sugar producer, for the manufacture and sale of tagatose. Production from the joint venture factory, capable of producing 1,200 metric tons per year, permitted sales of tagatose to the U.S. sweetener market to begin in 2003 when the 7-Eleven chain introduced Diet Pepsi Slurpees containing tagatose. Arla has stated that, if they can create enough market interest, a larger tagatose plant will be established. The construction of such a plant is estimated to take 18 to 24 months, during which time royalties from Arla will remain limited. Spherix continues to urge Arla to construct a larger plant.

The Company believes that tagatose will fill a market not currently accessible to other sweetener products and will also compete with a number of them. That market may initially include confections, ice cream, frozen desserts, diet sodas, cereals, and frosting. Later, market applications may broaden to include chocolate candy, baked goods, heat-processed foods, other dairy products, and other products in which the full bulk of sugar is required. Tagatose may also be used in prebiotics, healthy drinks and foods, and dietary supplements. Manufacturers have long sought a low-calorie, full-bulk substitute for table sugar; however, none has been as successful in emulating the flavor of table sugar as has tagatose. Unlike table sugar, tagatose has been shown to cause no tooth decay, and has now won FDA approval to carry the label “does not cause tooth decay”, or “noncariogenic.” An unexpected market for tagatose was

opened up in the soft drink industry by the discovery that tagatose is synergistic with the high intensity sweeteners used in diet sodas, thereby improving the taste and mouthfeel of diet sodas. To promote greater market interest in tagatose by food and beverage manufacturers, Arla has teamed with Symrise, one of the world's top producers of flavors and fragrances, in developing new flavor blends using tagatose.

Tagatose has been found to be a pre-biotic, a substance that improves the digestion of food and is beneficial to health. Pre-biotics are widely sold in Europe and Asia and are increasingly appearing in the U.S.

The Company has obtained a number of foreign patents on the use and manufacture of tagatose, including countries with significant market potential, such as Japan and Canada.

In 2002, Spherix filed a Notice of Arbitration against Arla under the terms of its License Agreement with that firm, contending that it had suffered from Arla's slow progress in bringing tagatose to market. On November 13, 2003, the Company settled its arbitration and entered into an Amendment to the September 27, 1996 License agreement with Arla. The amendment extended the period under which the high-end fees on the commercial sales of tagatose are due the Company until at least March 25, 2011, and until August 25, 2016, subject to certain conditions. In turn, the Company relinquished its rights to raise any additional delay claims against Arla. Arla agreed to give up its right to deduct the \$1 million prepayment against future royalties payable to the Company. Arla was granted the exclusive worldwide rights to manufacture tagatose for any type of product or purpose. Most importantly, Arla agreed to supply limited amounts of tagatose to Spherix for Spherix's sales as Naturlose to the non-food and drug markets. This permitted Spherix to begin marketing for these purposes. A number of firms have expressed interest in Naturlose and, in 2004, one pharmaceutical company purchased a limited amount of Naturlose for potential use in a pharmaceutical product.

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Toward year-end, the potential merger of Arla Foods with the large dairy company, Campina, of the Netherlands, to form the world's largest dairy company, was announced. That merger is still in discussions, and its effect on the production of tagatose has yet to be announced. However, Campina officials have emphasized a goal of producing innovative whey products, which Spherix officials believe should embrace tagatose.

Non-Food Use of Tagatose. Spherix retains all sales rights to non-food uses of tagatose and has created the brand name "Naturlose™" for all non-food uses of the product. Arla supplies Spherix's requirements for its sales of Naturlose through a supply agreement. Spherix has patented the use of Naturlose in treating Type 2 diabetes and other uses in health and medicine as outlined below.

In the year 2000, the Company achieved GRAS status for the use of Naturlose as a sweetener (excipient) in drugs for non-chronic use by adults and children. Also in the year 2000, the Company achieved GRAS status for the uses of Naturlose in toothpaste, mouthwash, lipstick and other cosmetic products.

Among the potential uses of Naturlose are:

Treatment for Type 2 Diabetes. Small Phase 1 and Phase 2 clinical trials at the University of Maryland School of Medicine have found tagatose effective as an adjuvant treatment of Type 2 diabetes. In addition, over the one-year trial, all subjects lost weight at physician-approved rates. 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 tagatose produced no rise in blood glucose or insulin levels in diabetic or normal subjects. Tagatose taken before the consumption of glucose produced a blunting effect on the otherwise normally expected rise in blood glucose.

Anti-hyperglycemic Agent. Tagatose functions as an anti-hyperglycemic agent to prevent the formation of advanced glycosylation end-products, which is one of the major causes of aging.

Increasing the shelf life of stored blood, platelets and medicinal proteins. A research project has been started at the Albert Einstein College of Medicine to develop these properties. Spherix will have rights to resulting intellectual property. Initial results are favorable, and the Company plans to continue to support the study.

Anemia and Hemophilia Treatment. Tagatose has been shown to improve blood factors indicating that tagatose may be useful as a drug or drug adjuvant in the treatment of anemia and hemophilia.

Increased Fertility and Improved Fetal Development Drug. Tagatose may increase the fertility of humans and other animals, to effect higher percentages of live fetuses, and to cause those fetuses to be heavier, still within normal bounds, than those of humans or other animals not having taken tagatose.

Preservative of Human Organs. Tagatose may be used in the transplanting and storage of human organs to protect against cyto-oxidation and toxic chemicals.

The drug uses mentioned above require regulatory approval before they can be brought to market.

FlyCracker as a Pesticide. The Company patented and developed a safe-for-humans, environmentally friendly pesticide, which it branded FlyCracker®. Sales of FlyCracker began in 2000 and while feedback from users was positive, sales remained below expectations and were insufficient to cover the related operating and marketing efforts of the Company. As a result the Company decided to scale back active efforts to sell and promote the product in 2003, and in January of 2004 the Company discontinued its remaining sales activities. The Company remains hopeful that it will be able to license the product in the future.

Capital for Development. While the products under development show promise, continued progress is dependent upon many factors, including, but not limited to, the Company's having sufficient funds and resources to pursue them. Over its history, the Company has supported its research and development in part by using funds generated by its InfoSpherix Division; however, given the lower margin on new business, the InfoSpherix Division may no longer be able to support the activities of the BioSpherix Division. Funds have also been raised from private placements of Company stock and warrants, some of the proceeds of which have been used to increase the state of development, market penetration and sales of the products mentioned.

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BioSpherix revenue accounted for less than 1% of the Company's total revenue in 2004. BioSpherix also contributed \$794,000 to the Company's net loss in 2004.

InfoSpherix Division

Government Information Services

Government Information Services' ("GIS") information professionals design and operate contact centers providing information management and materials to the public on various socially beneficial subjects, as well as other information services, such as reservations and tourism. GIS focuses on those clients who are looking to leverage technology in the ever-advancing world of information management. GIS researches, collects, organizes and disseminates information by providing customized contact center services combining advanced data collection systems, expert decision support systems, tele-support utilizing live operators, and advanced telecommunication technologies like Interactive Voice Response ("IVR"). GIS answers millions of calls annually from professionals and the public nationwide. It operates two Maryland-based contact centers (Beltsville and Cumberland), and in March of 2004, temporarily added a contact center in Rapid City, South Dakota. All three contact centers efficiently manage and track high volumes of data. Coupling GIS's expert staff with its advanced technologies results in an effective system to collect and disseminate large amounts of information. The Company also provides reservation services for campgrounds and other parks via its ReserveWorld business line.

In December 2002, the National Park Service ("NPS") cancelled the re-procurement for the National Park Reservation System for which the Company had submitted its bid. The Company has operated this program for seven years; revenue recognized was \$3.9 million and \$4.2 million for the years ended December 31, 2004 and 2003, respectively, or 17% and 23% of total revenues for each year. NPS informed the Company that the U.S. Office of Management and Budget had ordered NPS to non-competitively bundle this program with the U.S. Forest Service's National Recreation and Reservation System contract ("NRRS"). The Company believed this action to be contrary to Federal procurement regulations. On June 26, 2003, the Court of Federal Claims notified the Company that the Government decided not to sole source the National Park Service Reservation System to the competition. Instead, a competitive procurement was issued in the spring of 2004 for the combined NPS and NRRS. In August 2004, this procurement was awarded to a competitor. Spherix protested this award and in December 2004, the Government Accountability Office sustained our protest, citing numerous flaws in the agency's handling of the procurement. The procurement was subsequently reopened and Spherix has resubmitted its proposal. Meanwhile, the Company's NPS contract has been formally extended through September 2005.

In 2004, the Company won the re-procurement of the Maryland information center contracts, which the Company has operated since 1998. The new contracts are for three years plus two additional option years. The combined Maryland contracts contributed 22% to the Company's revenues in 2004. Future revenues will reflect the more competitive price structure used to win the re-compete. While Spherix was not the lowest bidder, the Company's higher technical scoring gave the Company an overall higher score than the competition. Spherix is working to increase the amount of business performed under this contract.

In March 2004, the Company won a one-year, multi-million dollar Federal Retirement Thrift Investment Board ("FRTIB") contract with four option years. In addition, in early 2004, the Company acquired six additional government reservation contracts. In that acquisition, the Company purchased certain assets of Daksoft, Inc. related to its reservation business, which operates under the name "ReserveIt." The purchase includes the intellectual property rights to the name "ReserveIt" and the related contracts, as well as other assets of the division. In 2004, the Company also won reservations contracts with the States of Georgia and New Mexico.

Commercial Information Services

Commercial Information Services ("CIS") serves the needs of commercial clients. The focus is on health, pharmaceutical, medical data, and clinical trials management services. They range from inbound and outbound telesupport for information gathering and dissemination to health-professional operated decision support systems servicing health organizations and to advanced data services. CIS health services provide information to and for clients on a wide range of diseases and disabilities, disease prevention, and health education. Areas of expertise include pharmaceutical drug and product lifecycle support (including product launch and recalls), direct-to-consumer,

compliance, and clinical research support. Programs are staffed by healthcare professionals and other information specialists who are given extensive training and strict quality control guidelines. The Company's clients have included many of the major U.S. pharmaceutical companies, clinical research organizations, and their advertising agencies. Contracts with non-governmental parties are typically obtained following private negotiations. Projects range from months to years in duration.

CIS and GIS accounted for approximately 1% and 99% of the Company's total revenues in 2004, respectively. Most of CIS and GIS's revenues traditionally have been generated by a few large commercial and government contracts. See Note 1, "Concentrations," of the Notes to the Financial Statements included herein pursuant to Part II of this Form 10-K.

Government Contracts

See Note 10, "Commitment and Contingencies – *Government Contracts*," of the Notes to the Financial Statements included herein pursuant to Part II of this Form 10-K, which information is incorporated herein by reference.

Government contracts typically have terms and conditions which, while providing annual or multi-year terms, subject them to termination upon convenience or default.

Industry Segments

See Note 13, "Information by Business Segment," of the Notes to the Financial Statements included herein pursuant to Part II of this Form 10-K for industry segment information of the Company, which information is incorporated herein by reference.

Market Concentration

During 2004, 2003, and 2002, InfoSpherix contributed 99%, 94%, and 99% of total Company revenue. The Company's business operations are usually dependent upon substantial revenue from a select group of customers. In 2004, 2003, and 2002, revenue from each of the following customers accounted for more than 10% of total Company revenues:

2004	2003	2002
U.S. Government	U.S. Government	U.S. Government
State of Maryland	State of Maryland	State of Maryland
State of Michigan	State of Michigan	State of Michigan

It is currently expected that revenue from the U.S. Government, the State of Maryland, and the State of Michigan will each account for more than 10% of total Company revenues in 2005.

Patents and Trademarks

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

Patent No.	Patent Title	Issue Date	Expiration Date
U.S. 6,585,964	Method for Preventing or Minimizing Biodegradation of a Substance	7/1/03	5/6/19
U.S. 6,355,409	Tagatose as a Cytoprotective Supplement for the Storage of Organs to Reduce Reperfusion Injury	3/12/02	9/1/20
Canada 2,077,257	* Process for Manufacturing D-Tagatose	2/19/02	1/7/11
U.S. 6,225,452	Increased Fertility and Improved Fetal Development Drug	5/1/01	4/26/19
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

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Patent No.	Patent Title	Issue Date	Expiration Date
U.S. 6,015,793	Use of Tagatose to Enhance Key Blood Factors	1/18/00	4/26/19
Korea 190671	* Process for Manufacturing D-Tagatose	1/21/99	1/7/11
Japan 2,138,363	* D-Tagatose as a Low-Calorie Carbohydrate Sweetener and Bulking Agent	9/18/98	8/29/07
U.S. 5,690,950	Insecticidal Aliphatic Carboxylic Acid Compositions	11/25/97	10/4/16
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	2/3/14
Hong Kong 127095A	* D-Tagatose as a Low-Calorie Carbohydrate Sweetener and Bulking Agent	8/18/95	8/25/07
EPO 0 397 027	Method for Killing Pests	2/22/95	5/3/10
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. 5,166,193	Method for Killing Pests	11/24/92	11/24/09
Australia 655,166	* Process for Manufacturing D-Tagatose	1/7/92	1/7/07
U.S. 5,078,796	* Process for Manufacturing D-Tagatose (Tagatate)	1/7/92	3/25/11
U.S. 5,002,612	* Process for Manufacturing D-Tagatose	03/26/91	7/19/09
EPO 257 626	* D-Tagatose as a Low-Calorie Carbohydrate Sweetener and Bulking Agent	7/25/90	8/25/07
U.S. 4,786,722	* D-Tagatose as a Low-Calorie Carbohydrate Sweetener and Bulking Agent	11/22/88	8/29/06

*Licensed to Arla Foods.

Patent Applications. In addition to the above-listed issued patents, the Company has applied for patent protection as follows:

- D-Tagatose as an Anti-Biofilm Agent
- Chewing Gum Containing D-Tagatose as an Anti-Film Agent
- Use of Tagatose in Fiber Laxatives

Trademarks. The Company has trademarked its name, "Spherix," "ReserveWorld," its reservation system and "FlyCracker," its safe-for-humans pesticide. It has applied for the trademark "Naturlose" for non-food uses of tagatose and for the trademark "BioSpherix." It retains trademarks on its original name, "Biospherics," and a former subsidiary, "Vitalian Corp."

With respect to all of its inventions, the Company has received approximately 130 patents, including foreign issues. It has several patents pending and many additional invention disclosures. In addition to its strong 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.

Royalties. Fees are payable to the Company from Arla under the above-described License Agreement through August 25, 2016. Initial royalties will be used to offset approximately \$163,000 in patent maintenance costs incurred by Arla Foods and future patent maintenance costs. In late 2003, Arla began sales of tagatose and the Company has earned approximately \$4,000 and \$3,000 in royalties for the years 2004 and 2003, respectively, which were credited against Arla's patent maintenance costs.

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Seasonality

Revenues from reservation and tourism services are greatest in the spring and summer when vacation planning is the heaviest. Revenues from other sources tend to be more evenly spread throughout the year, although the fourth quarter is historically the low period of the year.

Sales Backlog

Sales backlogs at December 31, 2004 and 2003, were as follows (\$000s):

	December 31, 2004			December 31, 2003		
	Current	Non-Current	Total	Current	Non-Current	Total
GISD	\$ 22,100	\$ 38,900	\$ 61,000	\$ 14,259	\$ 14,349	\$ 28,608
CISD	—	—	—	—	—	—
BioSpherix	—	—	—	—	—	—
	<u>\$ 22,100</u>	<u>\$ 38,900</u>	<u>\$ 61,000</u>	<u>\$ 14,259</u>	<u>\$ 14,349</u>	<u>\$ 28,608</u>

The increased backlog between years is the result of the award of the FRTIB, State of Maryland and State of Georgia contracts and the purchase of the Daksoft reservation contracts.

Competition

The information systems industry is subject to rapid and significant technological change. The Company is in competition with other information services companies across the Nation. Many of these competitors have substantially greater financial and technical resources than the Company. While acknowledging strong competition from other information services firms, the Company has developed a specialized niche by concentrating on high quality, personalized service combined with computerization for efficiency and cost-effectiveness. The Company has established a reputation for rapidly starting up information projects to meet its clients' critical needs, while not compromising high quality and reasonable pricing. The Company has also established a successful niche in government camp ground reservation services and is now one of only two major suppliers of campground services in the U.S. The other major supplier is IAC/InterActiveCorp's ReserveAmerica. Over the years, the Company has invested over \$2 million in computer and telephony systems and over \$2 million in the development of specialized computer software products to improve its competitive position. The Company continues to upgrade and enhance those systems.

Competitors of BioSpherix are numerous and include, among others, major pharmaceutical, chemical, consumer, and biotechnology companies, specialized firms, universities and other research institutions. Over the past several years, various sugar alcohols have been used in food products as bulk sweeteners. However, none has the taste of table sugar and most are more caloric than tagatose. Bulk sweeteners are used in products where the bulk of sugar is essential, such as baked goods, chocolates, and ice cream. High intensity sweeteners, such as aspartame, saccharin, and sucralose do not provide the bulk needed for these products. 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.

Research and Development

BioSpherix expenditures for research and development were approximately \$196,000, \$423,000, and \$476,000 in 2004, 2003, and 2002, respectively. These expenditures were incurred primarily in the ongoing efforts to commercialize tagatose, including its development for drug uses and improved production processes. To better pursue its development efforts, the BioSpherix Division established a new laboratory and offices in 5,000 square feet of rented space in Annapolis, Maryland. This is in keeping with a Corporate plan to evolve the Company's two divisions as separate corporate entities.

Governmental Regulation

The business activities of the Company are subject to a variety of Federal and state compliance, licensing, and certification requirements. Management believes that the Company is, and has been at all times, in full compliance with

Federal and state environmental protection and worker safety laws. The Company has not incurred significant expense in complying with such laws and does not anticipate material expense.

The Company is also required to comply with the Sarbanes-Oxley Act of 2002. On March 2, 2005, the SEC announced that the Commission had extended the compliance dates of Section 404 of the Sarbanes-Oxley act for non-accelerated filers. Under the extension, non-accelerated filers, such as Spherix, will begin to comply with the internal control over financial reporting requirements for its first fiscal year ending on or after July 15, 2006. The Company anticipates that the cost of implementing Section 404 over the next two years could be significant.

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, net income, capital expenditures or competitive position.

Employees

In 2004, the Company employed an average of 560 persons on a full- or part-time basis. Of this total, approximately 300 were full-time employees. The Company's employees are not currently unionized, and management believes that its relations with the Company's employees are harmonious.

Geographic Areas

InfoSpherix's business is, and has been, based in the United States. Accordingly, InfoSpherix revenues are entirely from U.S.-based operations.

BioSpherix's licensee for tagatose's food use, Arla, is located in Europe. Arla introduced tagatose to U.S. markets first, prior to worldwide distribution.

Item 2. PROPERTIES

In November 1997, the Company signed a lease agreement effective May 1, 1998, for 51,625 square feet of office, call center, research labs, and warehouse space in the same Beltsville, Maryland, facility previously occupied, under the terms of a lease that expires on February 28, 2009. This facility contains corporate administration, human resources, accounting, sales and marketing, technical services, warehousing, and call center operations for both InfoSpherix segments. In November 2003, the Company signed a lease agreement for 31,526 square feet of office and call center space in Cumberland, Maryland. The lease expires on October 31, 2007. In 2004, as part of its acquisition of certain assets of Daksoft, Inc.'s reservation business, the Company signed an agreement to lease 8,280 square feet of call center space in Rapid City, South Dakota, for a term of eighteen months. In 2004, the Company also signed an agreement to lease 5,000 square feet of office, research lab and warehouse space for BioSpherix in Annapolis, Maryland. The lease expires June 30, 2009.

Throughout 2004, the Company operated at approximately 40%, 80%, 85% and 50% of productive capacity at the Beltsville, Cumberland, Rapid City, and Annapolis facilities, respectively.

Item 3. LEGAL PROCEEDINGS

Information required by this Item 3 is included in Note 10 "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

There were no matters submitted by the Company during the fourth quarter of 2004 to a vote of security holders through solicitation of proxies or otherwise.

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PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

The Company's common stock is traded in the over-the-counter market and is quoted in the NASDAQ National Market System under the symbol SPEX. No cash dividends have been paid. The Company's loan agreement with its bank does not expressly restrict the payment of dividends; however, no such payments are anticipated in the near future.

As of February 23, 2005, the number of shareholders of record of the Company's common stock was approximately 6,600. 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, 2004, based on the daily closing prices as reported on the NASDAQ National Market System:

	<u>High</u>	<u>Low</u>
1st Quarter 2004	\$ 7.800	\$ 5.910
2nd Quarter 2004	\$ 7.740	\$ 4.050
3rd Quarter 2004	\$ 5.141	\$ 2.680
4th Quarter 2004	\$ 4.350	\$ 2.600
1st Quarter 2003	\$ 7.850	\$ 4.950
2nd Quarter 2003	\$ 8.850	\$ 6.010
3rd Quarter 2003	\$ 9.300	\$ 7.000
4th Quarter 2003	\$ 8.240	\$ 5.600

On February 18, 2004, warrants for 500,000 shares of Common Stock were exercised at \$6.90625 per share, compared to the then current market price of \$6.76 per share, by an institutional investor, and the expiration date of the remaining 585,973 warrants was extended until February 25, 2008, at an exercise price of \$7.00 per share of common stock. The remaining warrants were assigned and transferred to another institutional investor in 2004.

In connection with the above-described warrants, the investor has agreed that it will not exercise any of the warrants to the extent that it would acquire shares of Common Stock exceeding 9.9% of the outstanding Common Stock, nor will it knowingly sell shares to anyone to the extent that their holdings in the Company would exceed 4.9% of the outstanding Common Stock.

The warrants and shares of Common Stock were issued in transactions exempt from Registration pursuant to Section 4(2) of the Securities Act. The Company has registered the shares issuable upon exercise of the warrants for resale by the institutional investor.

Information concerning the Company's equity compensation plans is incorporated by reference from the Proxy Statement for the Annual Meeting of Stockholders for the fiscal year ended December 31, 2004, which will be filed with the Securities and Exchange Commission not later than 120 days after the end of the 2004 fiscal year.

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The Company has a share repurchase program in place that authorizes the purchase of up to \$1,000,000 of the Company's shares in the open market. During 2004, the Company repurchased 18,950 shares for \$74,352.

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased (2)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs
Jan 1 to Jan 31	—	—	—	\$ 914,455
Feb 1 to Feb 29	—	—	—	\$ 914,455
Mar 1 to Mar 31	1,800	\$ 6.05	1,800	\$ 903,569
Apr 1 to Apr 30	—	—	—	\$ 903,569
May 1 to May 31	5,150	\$ 4.98	5,150	\$ 877,920
Jun 1 to Jun 30	—	—	—	\$ 877,920
Jul 1 to Jul 31	—	—	—	\$ 877,920
Aug 1 to Aug 31	—	—	—	\$ 877,920
Sep 1 to Sep 30	1,200	\$ 3.44	1,200	\$ 873,787
Oct 1 to Oct 31	7,300	\$ 3.12	7,300	\$ 850,992
Nov 1 to Nov 30	3,000	\$ 3.14	3,000	\$ 841,562
Dec 1 to Dec 31	500	\$ 2.92	500	\$ 840,102
Total for year	18,950	\$ 3.92	18,950	\$ 840,102

(1) The Company's share repurchase program was first announced on September 19, 2001, authorizing the purchase of up to \$1,000,000 of the Company's common stock shares. There is no expiration date of the program.

(2) All share repurchases were effected in accordance with the safe harbor provisions of Rule 10b-18 of the Securities Exchange Act.

Item 6. SELECTED FINANCIAL DATA

	2004	2003	2002	2001	2000
Revenue	\$ 22,348,418	\$ 18,086,711	\$ 15,131,855	\$ 19,937,461	\$ 17,034,694
Net (loss) income	\$ (2,822,045)	\$ (2,256,770)	\$ (2,921,926)	\$ 567,823	\$ 591,070
Net (loss) income per share, diluted	\$ (0.24)	\$ (0.20)	\$ (0.26)	\$ 0.05	\$ 0.06
Total assets	\$ 15,243,949	\$ 14,167,257	\$ 15,453,140	\$ 13,240,928	\$ 13,451,258
Long-term debt obligations	\$ 45,580	\$ 63,310	\$ 90,530	\$ 104,190	\$ 358,411
Cash dividends declared per common share	\$ —	\$ —	\$ —	\$ —	\$ —
Stockholders equity	\$ 10,367,690	\$ 9,489,236	\$ 11,261,458	\$ 9,522,930	\$ 8,900,739
Working capital	\$ 4,215,573	\$ 5,043,672	\$ 8,787,502	\$ 7,139,196	\$ 6,357,594

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

Overview

The Company operates via two principal segments, BioSpherix and InfoSpherix. BioSpherix develops proprietary products for commercial applications. InfoSpherix provides contact center information and reservations services for government and industry.

BioSpherix engages in product development, notably tagatose. The exclusive rights to manufacture tagatose have been licensed to a foreign entity along with the exclusive rights to sell tagatose for food and beverage uses. Tagatose was first introduced in commercial products in 2003. Beginning July 2003, the Company has earned approximately \$4,000 and \$3,000 in royalty revenue for the years 2004 and 2003, respectively, which have been credited against Arla's patent maintenance costs. As part of the fall 2003 settlement of the arbitration proceeding with its licensee, the parties agreed to extend the date through which the Company shall be entitled to high-end royalties for tagatose sales until at least March 25, 2011, and until August 25, 2016, subject to certain conditions. Future royalties will depend on increased sales of this product by the licensee, which are outside of the control of the Company. In 2004, one pharmaceutical company purchased Naturlose for potential use in a pharmaceutical product. Although the pharmaceutical company has since purchased additional amounts of Naturlose, the outcome of the development program is yet to be determined. Development of sales for non-food uses of tagatose ("Naturlose") retained by the Company, may be further limited by the lack of adequate and continuing supply from Arla.

InfoSpherix generates substantially all of the Company's continuing revenue. In 2004 and 2003, InfoSpherix generated substantially all of its revenue from government customers. The Company has developed a niche in providing campground and other reservation services via its ReserveWorld business line. During 2004, the Company won the re-compete on the State of Maryland contracts, won a contract with the Federal Retirement Thrift Investment Board ("FRTIB"), added two additional state governments as ReserveWorld customers and purchased six additional state and county government reservation contracts. The Company's National Park Service ("NPS") contract has also been extended through September 30, 2005, and the procurement for the combined NPS and U.S. Forest Service's National Recreation and Reservation System contract has subsequently been reopened and Spherix has resubmitted a proposal as noted below under "InfoSpherix Operations."

Results of Operations 3/4 2004 Compared with 2003

In 2004, the Company reported a net loss of \$2.8 million (\$0.24 per diluted share) on sales of \$22.3 million for the year, compared with a net loss of \$2.3 million (\$0.20 per diluted share) on sales of \$18.1 million in 2003.

Revenue

Revenue between years increased \$4.3 million (24%). Revenue from the InfoSpherix Division increased \$5.2 million and the BioSpherix Division's revenue decreased approximately \$900,000. The increased revenue from the InfoSpherix Division was from the addition of five new government contracts that the Company won late in 2003 and early 2004, and from the purchase of six other state and county government reservation contracts in March 2004. The decrease in the BioSpherix revenue was the result of \$1 million that was recognized in 2003 as part of the Arbitration settlement with Arla Foods (see "BioSpherix Operations" below).

Direct Contract and Operating Costs

Direct contract and operating costs increased \$5.1 million (42%) between years as a result of the new contracts noted above and the increase in overhead costs related to the larger facility in Cumberland, Maryland, the addition of a Rapid City, South Dakota contact center, and the new BioSpherix facility in Annapolis, Maryland.

Additional overhead costs of approximately \$600,000 related to operating a larger facility in Cumberland was offset by the benefit gained from the new FRTIB, Ohio and Georgia contracts in 2004. Now that the Company has settled into its new facility, it expects to be able to reduce some of its direct and indirect costs and run more efficiently in 2005.

Under the terms of the asset purchase agreement with Daksoft, the Company agreed to continue operations of the Rapid City, South Dakota contact center for a period of eighteen months. For 2004, the South Dakota operation's direct contract and operating costs of \$1.5 million (inclusive of \$116,000 in amortization expense related to the purchase of the six contracts from Daksoft) exceeded their revenues by approximately \$100,000. The Company expects the South Dakota operations to operate at a break-even for 2005 and the Company plans to relocate operations of these contacts to its Maryland facilities by the end of 2005.

Selling, General and Administrative

Selling, general and administrative expense ("S,G&A") for 2004 decreased by \$885,000 (14%) from that of the prior year. In 2004, the Company increased its InfoSpherix marketing activity by approximately \$500,000, with a strong focus on telecommunications business. The increase in marketing costs, however, was more than offset by the decrease in legal expenses between years. Legal expenses accounted for \$1.5 million of the decrease between years, from \$1.6 million in 2003 to approximately \$110,000 in 2004. The 2004 legal costs were net of a \$250,000 credit related to legal fees incurred in 2003. Included in the 2003 legal costs were \$981,000 related to the Arla arbitration, \$331,000 related to the NPS re-procurement cancellation, and \$127,000 related to other legal matters.

Research and Development

Research and development costs decreased \$195,000 (50%) between years. The reduction is primarily related to independent studies that we conducted in 2003 and a reduction in overhead costs attributed to R&D activities.

Net Loss

The Company incurred a \$2.8 million loss in 2004 compared to a \$2.3 million loss in 2003. The loss incurred by InfoSpherix increased by approximately \$1.3 million in 2004 due to the relocation of the Cumberland operations to a larger facility and to the addition of a Rapid City, South Dakota, contact center. The loss incurred by BioSpherix decreased by approximately \$700,000 between years due to the settlement of the Arla arbitration in late 2003, a \$250,000 credit in 2004 against legal fees incurred in 2003, and to the reduction in research and development activity.

InfoSpherix Operations

The following schedule summarizes the breakdown of InfoSpherix revenue between government and commercial contracts (in \$000s):

	For the Year Ended December 31	
	2004	2003
Government	\$ 22,047	\$ 16,247
Commercial	167	807
	<u>\$ 22,214</u>	<u>\$ 17,054</u>

InfoSpherix revenue for 2004 increased \$5.2 million (30%) over that of the prior year as a result of the addition of five new government contracts that the Company won in late 2003 and early 2004, and the purchase of six other government reservation contracts. The Company is now one of only two major suppliers of campground reservations services in the U.S.

In December 2002, the National Park Service ("NPS") cancelled the re-procurement for the National Park Reservation System for which the Company had submitted its bid. The Company has operated this program for seven years, and revenue recognized was \$3.9 million and \$4.2 million for the years ended December 31, 2004 and 2003, respectively, or 17% and 23% of total revenues for each year. NPS informed the Company that the U.S. Office of Management and Budget had ordered NPS to non-competitively bundle this program with the U.S. Forest Service's National Recreation and Reservation System contract ("NRRS"). The Company believed this action to be contrary to Federal procurement regulations. On June 26, 2003, the court of Federal Claims notified the Company that the Government decided not to sole source the National Park Service Reservation System to the competition. Instead, a competitive procurement was issued in the spring of 2004 for the combined NPS and NRRS. In August 2004 this procurement was awarded to a competitor. Spherix protested this award and in December 2004, the Government

Accountability Office sustained our protest citing numerous flaws in the agency's handling of the procurement. The procurement was subsequently reopened and Spherix has resubmitted its proposal. Meanwhile, the Company's NPS contract has been formally extended through September 2005.

In 2004, the Company won the re-procurement of the Maryland information center contracts, which the company has operated since 1998. The new contract started on November 1, 2004. The combined Maryland contracts contributed 22% to the Company's revenues in 2004. Future revenues will reflect the more competitive price structure used to win the recompete. While Spherix was not the lowest bidder, the Company's higher technical scoring gave the Company an overall higher score than the competition. Spherix is working to increase the amount of business performed under this contract.

In March 2004, the Company also won a one-year, multi-million dollar Federal Retirement Thrift Investment Board ("FRTIB") contract with four option years. In addition, in early 2004, the Company acquired six additional government reservation contracts. In that acquisition, the Company purchased certain assets of Daksoft, Inc. related to its reservation business, which operates under the name "ReserveIt." The purchase includes the intellectual property rights to the name "ReserveIt" and the related contracts, as well as other assets of the division. The company also won reservation contracts for the states of Georgia and New Mexico.

Revenue from commercial contracts decreased between years. Commercial contracts are typically for shorter terms than government contracts and that can result in substantial variations in commercial revenues. Commercial contracts are being pursued by the Company, but the Company's recent history has been that contracts have been received on a sporadic basis.

The Company's business development group is targeting the commercial pharmaceutical market, the government contact center and technology markets, and the ReserveWorld product and services market, for continued growth. Currently, the Company is bidding on several contracts and expects to bid on more contracts throughout the coming year, although no assurance can be given at this time that these efforts will result in new business for the Company.

BioSpherix Operations

The arbitration action initiated in 2002 against Arla, the Company's tagatose licensee for food and beverage uses, was settled in November 2003. The arbitration was initiated as a result of the delay in tagatose commercialization by Arla Foods. As a part of the settlement, Arla Foods agreed that \$1 million previously paid to the Company would no longer be required to offset future royalties. As a result, \$1 million, previously classified as deferred revenue, was recognized as revenue in 2003 and is directly related to the decrease in revenue between 2003 and 2004.

BioSpherix is entitled to high end royalties from Arla's sales of tagatose until at least 2011, and, depending upon certain conditions, until 2016. The payments are net of accumulated and continuing foreign patent maintenance costs. Accumulated patent maintenance costs were approximately \$163,000 at year-end.

We have received minimal royalties from Arla in 2003 and 2004. While tagatose has been introduced into several food and beverage products, Arla currently has insufficient sales volume and manufacturing capacity to produce tagatose as the rate necessary to generate meaningful royalties. Arla has stated that it is evaluating the construction of a larger tagatose plant, but no decision has yet been announced. This decision will depend on Arla's ability to create greater market interest in tagatose.

Commercialization of Naturlose will focus on its use as a sweetener or flavor enhancer in toothpaste, mouthwash, over-the-counter drugs, pharmaceuticals and other products to which the Company retains rights.

Sales of FlyCracker began in 2000 and while feedback from users remained positive, sales remained below expectations and were insufficient to cover the related operating and marketing efforts of the Company. As a result the Company decided to scale back active efforts to sell and promote the product in 2003, and in January of 2004 the Company discontinued its remaining sales activities. The Company is pursuing licensing arrangements and sold off its excess inventory of FlyCracker in 2004.

In July 2004, the BioSpherix Division relocated to a new laboratory and offices in 5,000 square feet of rented space in Annapolis, Maryland.

Sales Backlog

The Company's sales backlog as of December 31, 2004, was \$61 million, compared to \$28.6 million as of December 31, 2003. In 2004, the Company added two new contracts, won the re-procurement of its State of Maryland contracts, and purchased six other government reservation contracts.

Results of Operations 2003 Compared with 2002

InfoSpherix Revenue

The following schedule summarizes the breakdown of InfoSpherix revenue between government and commercial contracts (in \$000s):

	<u>For the Year Ended December 31</u>	
	<u>2003</u>	<u>2002</u>
Government	\$ 16,247	\$ 14,268
Commercial	807	775
	<u>\$ 17,054</u>	<u>\$ 15,043</u>

InfoSpherix revenue for 2003 increased \$2.0 million (13%) from that of the prior year as a result of continued growth in the Division's reservation business. Revenue from Government contracts increased 14% between years. The increase in revenue between years is the result of two new contracts that

began late in 2002. In October of 2002, the Company began work on a contract with the Office of Personnel Management; the total amount of the award is \$6.0 million over five years. In December of 2002, the Company began work on a contract with the Indiana Department of Natural Resources; the total amount of the award is expected to be approximately \$5.1 million over four years.

InfoSpherix added four new government contracts in 2003, including three state ReserveWorld customers that should benefit 2004 operations and beyond.

BioSpherix Revenue

BioSpherix revenue for 2003 increased \$943,000 from that of 2002 as a result of the \$1 million realized as part of the November 2003 settlement with Arla noted above.

In 2003, the Company purchased one metric ton of tagatose from Arla, to be used in the promotion of the non-food uses of tagatose under the product name "Naturlose.Ô"

Sales of FlyCracker began in 2000 and while feedback from users remained positive, sales remained below expectations and were insufficient to cover the related operating and marketing efforts of the Company. As a result the Company decided to scale back active efforts to sell and promote the product in 2003, and in January of 2004 the Company discontinued its remaining sales activities. The Company anticipated that it would be able to recover approximately half of the original cost of its current inventory in this way, and recorded a loss of approximately \$100,000 in 2003 for the portion the Company did not expect to recover along with a corresponding decrease in the carrying value of the inventory on the books.

Direct Contract and Operating Costs

Direct contract and operating costs increased \$1.1 million (10%) between years as a result of the new InfoSpherix contracts noted above. Similarly, revenue, exclusive of the \$1.0 million realized from the Arla settlement, increased \$2.0 million (13%) between years.

Selling, General and Administrative

Selling, general and administrative expense ("S,G&A") for 2003 increased by \$1.3 million (27%) over that of the prior year. Legal costs accounted for \$1.0 million of the increase between years, from \$553,000 in 2002 to \$1.6 million in 2003. Included in the 2003 legal costs were \$981,000 related to the Arla arbitration, \$331,000 related to the NPS re-procurement cancellation, and \$127,000 related to other legal matters.

Research and Development

Research and development costs decreased \$85,000 (18%) between years. While R&D labor increased between years, the cost for independent studies conducted by third parties, primarily associated with attaining GRAS status for Naturlose products, decreased.

Net Loss

The Company incurred a \$2.3 million loss in 2003, compared to a \$2.9 million loss in 2002. The loss incurred by InfoSpherix decreased by approximately \$450,000 in 2003, due to increased business from new InfoSpherix contracts entered into in late 2002. The loss incurred by BioSpherix decreased by approximately \$300,000 in 2003, due in large part to the Arla Foods settlement.

Critical Accounting Policies

The preparation of financial statements in conformity with generally accepted accounting principles 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.

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.

Long-Lived Assets and Other Intangible Assets

Long-lived assets and other intangible assets are reviewed for impairment whenever carrying amount of the asset may not be recoverable. An impairment loss is recognized when the carrying amount of a long-lived asset exceeds the sum of the undiscounted cash flows expected to result from the asset's use and eventual disposition.

Allowances for Doubtful Accounts

We are required to estimate the collectibility of our trade receivables. A considerable amount of judgment is required in assessing the realization of these receivables, including the current creditworthiness of each customer and

the related aging of past due balances. We evaluate specific accounts when we become aware of information indicating that a customer may not be able to meet its financial obligations due to a deterioration of its financial condition, lower credit ratings or bankruptcy. Reserve requirements are based on the best facts available to us and are re-evaluated and adjusted as additional information is received, such as information regarding settlements of prior financing arrangements.

Liquidity and Capital Resources

Working capital as of December 31, 2004, was \$4.2 million, which represents a \$828,000 decrease from working capital of \$5.0 million at December 31, 2003. The decrease in working capital is related to the purchase of certain assets of Daksoft, Inc., fixed assets and leasehold improvements related to the new Cumberland and Annapolis leases, and to software development costs related to several of the Company's new contracts. These investments were primarily financed through proceeds of \$3.5 million from the February 18, 2004 exercise of warrants by an institutional investor.

The Company renewed its Loan Agreement (the "Agreement") with Bank of America (the "Bank") on June 30, 2004, which provides for borrowing up to \$2 million. Outstanding borrowings under the Agreement aggregated \$1.97 million at December 31, 2004, and are collateralized by a restricted \$2.0 million certificate of deposit. The interest rate under the agreement is based on the LIBOR fixed rate, which was 4.28% at year-end. The total amount available for further advance to the Company was \$33,000 under the Agreement at December 31, 2004. The line expires on June 30, 2005, but the Company anticipates that the line will be renewed in 2005. However, if the Company does not extend the line of credit, the Company believes that it has adequate funds to meet all of its current obligations for the balance of 2005.

At December 31, 2004, the Company had a \$1.4 million performance bond on its Indiana reservation contract. The performance bond was collateralized by a restricted \$700,000 certificate of deposit, which matures on June 30, 2005. The Indiana contract was subsequently amended to remove the bond requirement.

Cash flow for the year ended December 31, 2004, reflects a net cash outflow of \$791,000, consisting of \$386,000 used in operating activities, \$3.9 million used in investing activities, and \$3.5 million provided by financing activities. The \$292,000 decrease in cash used in operating activities in 2004 from that of the prior year, was primarily due to the decrease in legal expenditures between years, which more than offset an increase in overhead costs related to the move to a larger Cumberland, Maryland facility, the new Rapid City, South Dakota, contact center and the new BioSpherix facility in Annapolis, Maryland. The \$1.0 million decrease in investments is directly related to the \$2.7 million used in 2003 for the restricted certificate of deposit, with an offsetting increase in investing activities with the purchase of certain assets of Daksoft, Inc., fixed assets and leasehold improvements related to the new Cumberland and Annapolis leases, and to software development costs related to several of the Company's new contracts. These investments were primarily financed through the proceeds of \$3.5 million from the February 18, 2004 exercise of warrants by an institutional investor. The Company anticipates that its capital needs for 2005 will be less than 2004, and will likely look to finance upfront costs for property and equipment on any new contracts the Company wins in 2005 through leasing arrangements or secured loans.

Trends and Outlooks

The InfoSpherix Division was successful in increasing its sales backlog between December 31, 2003 and 2004, to a record level of \$61 million. Future InfoSpherix performance will depend in large part on winning new state and Federal contracts, and continued expansion of the ReserveWorld business into other states and localities, as well as the bid of the NRRS contract noted above. The Company re-bid and won its Maryland Information Center contract. The Maryland contract accounted for 31% and 22% of the Company's total revenue for the years ended December 31, 2003 and 2004, respectively. The new Maryland contract started November 1, 2004, and future revenues will reflect the more competitive price structure used to win the re-compete. While Spherix was not the lowest bidder, the Company's higher technical scoring gave the Company an overall higher score than the competition.

Tagatose, Spherix's low-calorie, full-bulk sweetener licensed to Arla Foods Ingredients, has been making progress in market entries. Tagatose has been introduced into several food and beverage products. On April 29, 2004, New Zealand and Australia approved tagatose for use in those countries, free of any per capita use limitations. In June 2004, JECFA (the Joint FAO/WHO Expert Committee on Food Additives) removed its former limit on the daily

consumption of tagatose, and imposed no new limit. The new announcement should lead to expanded permitted uses of tagatose as a food additive throughout the international community. However, any expanded use and sales will depend on creating greater market interest and construction of a new and larger tagatose plant by Arla Foods Ingredients or its joint venture, SweetGredients. No decision has yet been announced. The construction of a new plant is estimated to take 18 to 24 months. Royalties also remain constrained by use of tagatose as a flavor enhancer (instead of as the sole sweetener) and by the fact that most sales have been for use in beverages, which results in a lower royalty rate than food products. Spherix has begun purchasing tagatose from Arla for use as Naturlose™ in selling for non-food uses by non-food product manufacturers, including use in toothpaste, mouthwash, cough syrup, and a fiber digestive aid, for which Spherix has developed prototypes. Several product manufacturers have expressed interest and, on October 14, 2004, the Company announced that it had sold its first shipment of Naturlose to a U.S. pharmaceutical company for a pharmaceutical application.

The Company is supporting work at the Albert Einstein College of Medicine (AECOM) to study the possible use of Naturlose in extending shelf life of blood and blood products. Preliminary testing suggests that the use of Naturlose can increase the shelf life of stored hemoglobin and platelets. Spherix will retain certain business rights to any commercial products developed under the joint effort. AECOM has long been a research leader in blood products, including efforts to develop artificial blood. Because of the critical shortage of blood, increased shelf life for this important health product is a high medical priority.

Spherix will also work with the University of Maryland School of Dentistry to conduct human clinical trials on the oral anti-plaque efficacy of Naturlose™. The object is to obtain validation on human subjects of the Firm's earlier laboratory tests that demonstrated Naturlose's ability to prevent and

destroy plaque formed by oral bacteria. Plaque-caused diseases of the teeth and gums have recently been described in the press as an enlarging health problem. If the tests are successful, the Company hopes to continue the work to obtain drug status under FDA regulations, and thereupon, enter Naturlose into that considerable market.

On March 2, 2005, the SEC announced that the Commission had extended the compliance dates of Section 404 of the Sarbanes-Oxley act for non-accelerated filers. Under the extension, non-accelerated filers, such as Spherix, will begin to comply with the internal control over financial reporting requirements for it's the first fiscal year ending on or after July 15, 2006. The Company anticipates that the cost of implementing Section 404 over the next two years could be significant.

Contractual Obligations

The following table summarizes the Company's contractual obligations at December 31, 2004, and indicates the year payments are due. In some cases estimates have been used where the exact amount and/or timing of the obligation is not presently known. The table does not include ordinary accounts payable and payroll type obligations.

Tabular Disclosure of Contractual Obligations

(numbers in 000's)

	Total	2005	2006 - 2007	2008 - 2009	Thereafter
Debt Obligations	\$ 1,967	\$ 1,967	\$ —	\$ —	\$ —
Capital Lease Obligations	74	30	44	—	—
Operating Lease Obligations	4,518	1,190	2,330	998	—
Purchase Obligations	779	779	—	—	—
Compensation Obligations	282	—	124	97	61
Total	<u>\$ 7,620</u>	<u>\$ 3,966</u>	<u>\$ 2,498</u>	<u>\$ 1,095</u>	<u>\$ 61</u>

No dividends were paid in 2004 and none are anticipated in 2005.

In 2002, the Company and its principal stockholders terminated a stock redemption agreement, thereby eliminating the classification of a portion of the Company's common stock outstanding as "Redeemable Common Stock."

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company manages its debt and its available cash by considering available investment opportunities, risks, tax consequences and overall financing strategies.

At December 31, 2004, the Company did not have any fixed-rate indebtedness and had approximately \$2.0 million of variable-rate indebtedness. The Company has not entered into any interest rate swaps or other derivatives with respect to its indebtedness.

Cash available for investment is typically invested in short term funds, which generally mature in 30 days, or money-market funds. In general, such funds are not subject to market risk because the interest paid on such funds fluctuates with the prevailing interest rate. The carrying amounts approximate market value. It is the Company's practice to hold these investments to maturity.

Assuming year-end 2004 variable rate debt and cash available for investment, a one percent change in interest rates would impact net interest income by less than \$13,000.

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 of Spherix Incorporated

We have audited the accompanying balance sheets of Spherix Incorporated (a Delaware corporation) (the Company) as of December 31, 2004 and 2003, and the related statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2004. 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 audits 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, 2004 and 2003, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2004, in conformity with accounting principles generally accepted in the United States of America.

/s/ Grant Thornton LLP

Vienna, Virginia
February 24, 2005

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Spherix Incorporated
Statements of Operations
For the years ended December 31, 2004, 2003, and 2002

	2004	2003	2002
Revenue	\$ 22,348,418	\$ 18,086,711	\$ 15,131,855
Operating expense			
Direct contract and operating costs	17,362,430	12,224,650	11,146,476
Selling, general and administrative expense	5,357,435	6,242,811	4,919,043
Research and development expense	196,364	390,893	475,997
Depreciation and amortization expense	2,277,682	1,503,003	1,593,380
Total operating expense	25,193,911	20,361,357	18,134,896
Loss from operations	(2,845,493)	(2,274,646)	(3,003,041)
Interest income (expense), net	23,447	17,876	81,115
Loss before taxes	(2,822,046)	(2,256,770)	(2,921,926)
Income tax expense	—	—	—
Net loss	\$ (2,822,046)	\$ (2,256,770)	\$ (2,921,926)
Net loss per share, basic	\$ (0.24)	\$ (0.20)	\$ (0.26)
Net loss per share, diluted	\$ (0.24)	\$ (0.20)	\$ (0.26)
Weighted average shares outstanding, basic	11,890,470	11,378,309	11,240,998
Weighted average shares outstanding, diluted	11,890,470	11,378,309	11,240,998

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

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Spherix Incorporated
Balance Sheets
As of December 31, 2004 and 2003

	2004	2003
ASSETS		
Current assets		
Cash and cash equivalents	\$ 3,475,846	\$ 4,267,001
Restricted investments	2,700,000	2,700,000
Trade accounts receivable, net of allowance for doubtful accounts of \$15,000 and \$20,000	1,742,699	1,491,727
Other receivables	140,314	17,183
Prepaid expenses and other assets	638,983	853,303
Total current assets	8,697,842	9,329,214
Property and equipment, net of accumulated depreciation of \$5,172,785 and \$4,537,696	5,517,279	4,665,457
Patents, net of accumulated amortization of \$247,374 and \$107,629	1,028,828	172,586
Total assets	\$ 15,243,949	\$ 14,167,257

LIABILITIES AND STOCKHOLDERS' EQUITY

Current liabilities		
Bank line of credit	\$ 1,966,784	\$ 1,716,743
Accounts payable and accrued expenses	1,493,683	1,718,496
Accrued salaries and benefits	969,046	832,572
Capital lease obligations	18,124	17,731
Deferred revenue	34,632	—
Total current liabilities	4,482,269	4,285,542
Capital lease obligations	27,456	45,579
Deferred compensation	125,959	122,655
Deferred rent	240,575	224,245
Total liabilities	4,876,259	4,678,021
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; 12,031,395 and 11,486,570 issued, 11,950,957 and 11,425,082 outstanding at December 31, 2004 and 2003, respectively	60,157	57,434
Paid-in capital in excess of par value	23,162,916	19,390,787
Treasury stock, 80,438 and 61,488 shares, at cost at December 31, 2004 and 2003, respectively	(464,786)	(390,434)
Accumulated deficit	(12,390,597)	(9,568,551)
Total stockholders' equity	10,367,690	9,489,236
Total liabilities and stockholders' equity	\$ 15,243,949	\$ 14,167,257

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

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Spherix Incorporated
Statements of Changes in Stockholders' Equity
For the years ended December 31, 2004, 2003 and 2002

	Common Stock		Paid-in Capital in Excess of Par	Treasury Stock		Retained Earnings (Accumulated Deficit)	Stockholders' Equity
	Shares	Amount		Shares	Amount		
Balance, December 31, 2001	10,790,170	\$ 40,143	\$ 14,222,739	52,602	\$ (350,097)	\$ (4,389,855)	\$ 9,522,930
Issuance of common stock							
Exercise of employee stock options	47,375	237	311,999	—	—	—	312,236
Exercise of stock warrants	575,000	2,875	3,702,288	—	—	—	3,705,163
Cost of stock issuance	—	—	(5,993)	—	—	—	(5,993)
Purchase of treasury stock	—	—	—	11,800	(62,571)	—	(62,571)
Stock-based compensation	—	—	20,700	—	—	—	20,700
Issuance of treasury stock in payment of expenses	—	—	495	(2,914)	22,234	—	22,729
Net reclassification for redeemable common stock	—	13,808	654,382	—	—	—	668,190
Net loss	—	—	—	—	—	(2,921,926)	(2,921,926)
Balance, December 31, 2002	11,412,545	57,063	18,906,610	61,488	(390,434)	(7,311,781)	11,261,458
Issuance of common stock							
Exercise of employee stock options	74,025	370	455,127	—	—	—	455,497
Cost of stock issuance	—	—	(2,000)	—	—	—	(2,000)
Stock-based compensation	—	—	31,050	—	—	—	31,050
Net loss	—	—	—	—	—	(2,256,770)	(2,256,770)
Balance, December 31, 2003	11,486,570	57,433	19,390,787	61,488	(390,434)	(9,568,551)	9,489,235
Issuance of common stock							
Sale of common stock in private placement	43,029	215	288,036	—	—	—	288,251
Proceeds from Employee Stock Purchase Plan	1,796	9	7,739	—	—	—	7,748
Exercise of stock warrants	500,000	2,500	3,450,625	—	—	—	3,453,125
Cost of stock issuance	—	—	(5,321)	—	—	—	(5,321)
Purchase of treasury stock	—	—	—	(18,950)	(74,352)	—	(74,352)
Stock-based compensation	—	—	31,050	—	—	—	31,050
Net loss	—	—	—	—	—	(2,822,046)	(2,822,046)
Balance, December 31, 2004	12,031,395	\$ 60,157	\$ 23,162,916	42,538	\$ (464,786)	\$ (12,390,597)	\$ 10,367,690

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

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Spherix Incorporated
Statements of Cash Flows
For the years ended December 31, 2004, 2003 and 2002

	2004	2003	2002
Cash flows from operating activities			
Net loss	\$ (2,822,046)	\$ (2,256,770)	\$ (2,921,926)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	2,277,682	1,503,002	1,593,380

Provision for uncollectible accounts receivable	(5,000)	(51,000)	36,000
Loss on disposal or write-down of assets	11,426	30,896	28,160
Loss on write-down of patents	—	28,572	—
Treasury stock issued in payment of expenses	—	—	22,730
Stock-based compensation	31,050	31,050	20,700
Changes in assets and liabilities:			
Trade accounts receivable	(245,972)	728,744	(684,230)
Other receivables	(123,131)	(3,839)	58,570
Prepaid expenses and other assets	214,320	(104,076)	(73,248)
Accounts payable and accrued expenses	221,503	499,728	252,993
Deferred rent	16,330	9,369	20,383
Deferred compensation	3,304	9,768	(9,268)
Deferred revenue	34,632	(1,103,662)	103,662
Net cash used in provided by operating activities	(385,902)	(678,218)	(1,552,094)
Cash flows from investing activities			
Purchases of property and equipment	(3,212,340)	(2,246,219)	(1,005,151)
Restricted cash	—	(2,700,000)	—
Proceeds from the sale of property and equipment	1,093	—	—
Additions to patent costs	(7,736)	(18,386)	(14,230)
Purchase of certain assets of Daksoft, Inc.	(700,000)	—	—
Net cash used in investing activities	(3,918,983)	(4,964,605)	(1,019,381)
Cash flows from financing activities			
Net change on bank line of credit	250,041	994,359	509,528
Net change in book overdraft	(99,780)	(166,882)	272,922
Payments on notes payable	—	—	(38,595)
Payments on capital lease obligations	(17,730)	(27,220)	(47,348)
Proceeds from issuance of common stock	3,460,872	455,498	4,017,399
Purchase of treasury stock	(74,352)	—	(62,571)
Cost of issuance of common stock	(5,321)	(2,000)	(5,994)
Net cash provided by (used in) financing activities	3,513,730	1,253,755	4,645,341
Net (decrease) increase in cash and cash equivalents	(791,155)	(4,389,068)	2,073,866
Cash and cash equivalents, beginning of year	4,267,001	8,656,069	6,582,203
Cash and cash equivalents, end of year	\$ 3,475,846	\$ 4,267,001	\$ 8,656,069
Supplemental cash flow information			
Interest paid	\$ 60,550	\$ 34,763	\$ 33,997
Property and equipment financed by capital leases	\$ —	\$ —	\$ 72,283
Property and equipment financed by accounts payable	\$ 66,131	\$ 276,193	\$ 5,314

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

Spherix Incorporated Notes to Financial Statements

1. Summary of Significant Accounting Policies

Nature of Business

Spherix Incorporated was founded in 1967, is incorporated in Delaware, and maintains three facilities in Maryland and one facility in South Dakota. The Company consists of a biotechnology division (“BioSpherix”) and an information services division (“InfoSpherix”). BioSpherix is dedicated to research, development, and productization of proprietary products. InfoSpherix consists of Commercial Information Services (“CIS”) and Government Information Services (“GIS”). The CIS and GIS operate contact center services providing consulting, information management, and materials management to the public as well as reservation and tourism solutions.

Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. At December 31, 2004, the Company had approximately \$3.2 million invested in treasury funds with a maturity of three months or less, which are included as cash and cash equivalents.

Concentrations

At December 31, 2004, four major contracts constituted 76% of the trade accounts receivable, the components of which were 27%, 24%, 14% and 11%. No other single contract was greater than 10% of total trade accounts receivable. Receivables from Federal and state government agencies represented 94% of the total trade accounts receivable.

Use of Estimates and Assumptions

The accompanying 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.

Property and Equipment and Depreciation

Property and equipment are stated at cost and consist of office furniture and equipment, computer hardware and software, leasehold improvements, and capital leases. Computer hardware and software include the cost of internally developed software programs, which have long-term benefits. It is the Company's policy to capitalize software developed for internal use. In 2004, the Company capitalized approximately \$1.1 million in internally developed software. The Company computes depreciation and amortization under the straight-line method 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 Statement of Operations.

Inventory

Included in prepaid expenses at December 31, 2004, is approximately \$5,000 of Naturlose. The inventory is valued at lower of cost or market.

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Research and Development Costs

Research and development costs are charged to operations as incurred.

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 using the following methods depending upon the terms of the contracts: time and materials or fixed price. Revenue under time and materials contracts 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 using the percentage-of-completion and unit-of-delivery methods. Losses, if any, on contracts are recorded during the period when first determined.

License Fees and Advance Royalties

License fees and royalties are recognized as revenue over the fixed term of the contract. Non-refundable fees are recognized when they are earned in accordance with the applicable contractual terms. Payments received that are related to future performance are deferred and recorded as revenue as they are earned over contractually specified future performance periods. See Note 10.

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. Valuation allowances are 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 tax payable for the period and the change during the period in deferred tax assets and liabilities.

Fair Value Information

The estimated fair value of the Company's financial instruments, which include cash, receivables, accounts payable, bank line of credit, and short-term notes payable reported in the balance sheet, approximate their carrying value given their short maturities.

Accounting for Stock-Based Compensation

The Company applies APB Opinion No. 25 and related interpretations in accounting for stock-based compensation. Accordingly, because the exercise price of options granted has typically been at market price, no compensation cost has been recognized, with the exception of approximately \$31,050 of compensation expense realized in both 2004 and 2003 as a result of issuing certain option grants at below market in 2002. The Company elected the "disclosure only" presentation of Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation* in 1996 and, consequently, makes no charge against income in the financial statements with respect to options granted with exercise prices at or above fair market value.

To measure stock-based compensation in accordance with SFAS 123, the fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model. The following table summarizes the pro-forma net loss and net loss per share resulting from applying SFAS 123.

		2004	2003	2002
Net loss, as reported		\$ (2,822,046)	\$ (2,256,770)	\$ (2,921,926)
Add: stock-based employee compensation expense included in reported net loss		31,050	31,050	20,700
(Deduct) add: total stock-based employee compensation (expense) benefit determined under fair-value based method for all awards		(605,051)	145,072	(868,867)
Pro forma net loss		\$ (3,396,046)	\$ (2,080,648)	\$ (3,770,093)
Net loss per share – basic	As reported	\$ (0.24)	\$ (0.20)	\$ (0.26)
	Pro forma	\$ (0.29)	\$ (0.18)	\$ (0.34)
Net loss per share – diluted	As reported	\$ (0.24)	\$ (0.20)	\$ (0.26)
	Pro forma	\$ (0.29)	\$ (0.13)	\$ (0.34)

Net Loss Per Share

Basic net loss per common share has been computed by dividing net loss by the weighted-average number of common shares outstanding during the year. Diluted net loss per common share has been computed by dividing net loss by the weighted-average number of common shares outstanding without an assumed increase in common shares outstanding for common stock equivalents, as common stock equivalents are antidilutive. Common stock equivalents, which consist of stock options and warrants that are assumed likely to be exercised, were 12,703 at December 31, 2004.

	2004	2003	2002
Weighted average shares outstanding, basic	11,890,470	11,378,309	11,240,998
Weighted average dilutive common stock equivalents	—	—	—
Weighted average shares outstanding, diluted	11,890,470	11,378,309	11,240,998

New Accounting Pronouncements

In December 2004, the FASB issued Statement No. 123R, “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 our consolidated statements of operations and comprehensive loss. The accounting provisions of FAS 123R are effective for reporting periods beginning after June 15, 2005. We are required to adopt FAS 123R in the third quarter of 2005. The pro forma disclosures previously permitted under FAS 123 no longer will be an alternative to financial statement recognition. See Note 1 to the notes to the consolidated financial statements for the pro forma net loss and net loss per share amounts, for years 2002 through 2004, as if we had used a fair-value based method similar to the methods required under FAS 123R to measure compensation expense for employee stock option awards. Although we have not yet determined whether the adoption of FAS 123R will result in amounts that are similar to the current pro forma disclosures under FAS 123, we are evaluating the requirements of FAS 123R and expect the adoption to have a significant adverse impact on our future statements of operations and comprehensive loss.

2. Restricted Investments

At December 31, 2004 and 2003, the Company had \$2,700,000 in restricted certificates of deposits. Of this amount \$2 million was restricted as collateral on the Company’s bank line of credit, and \$700,000 was restricted as collateral for a performance bond. The certificates of deposits mature on June 30, 2005.

3. Allowance for Doubtful Accounts

Management regularly reviews the accounts receivables for uncollectible and potentially uncollectible accounts and when necessary establishes an allowance for doubtful accounts.

Balance, December 31, 2001	\$ 35,000
Valuation adjustment	36,000
Balance, December 31, 2002	71,000
Write-off of uncollectible accounts	(1,000)
Valuation adjustment	(50,000)
Balance, December 31, 2003	20,000
Write-off of uncollectible accounts	(9,000)
Valuation adjustment	4,000
Balance, December 31, 2004	\$ 15,000

4. Property and Equipment

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

	2004	2003
Computer software	\$ 3,639,000	\$ 2,651,000
Computer hardware	5,050,000	4,862,000

Office furniture and equipment	609,000	504,000
Leasehold improvements	1,306,000	1,088,000
Capital leases	86,000	98,000
Total cost	10,690,000	9,203,000
Accumulated depreciation and amortization (including capital lease accumulated depreciation of \$40,830 and \$392,337)	(5,173,000)	(4,538,000)
Property and equipment, net	\$ 5,517,000	\$ 4,665,000

5. Intangible Assets

On March 1, 2004, the Company purchased certain assets of Daksoft, Inc. related to its reservation business, which operates under the name "ReserveIt." The purchase included the acquisition of six additional government reservation contracts and the intellectual property rights to the name "ReserveIt," as well as other assets of the division. Spherix purchased the assets for \$700,000 plus 43,029 shares of the Company's common stock (subject to certain restrictions), then trading at \$6.699 per share, on March 1, 2004. The Company assessed the value of the purchased contracts to be \$976,000 and will amortize \$139,000 annually over seven years, the estimated average useful life of the contracts. In 2004, the Company recognized a total of \$116,000 in related amortization expense for the ten-month period since the contracts were purchased.

6. Debt

Line of Credit

The Company renewed its Loan Agreement (the "Agreement") with Bank of America (the "Bank") on June 30, 2004, which provides for borrowing up to \$2 million. Outstanding borrowings under the Agreement aggregated \$1.97 million at December 31, 2004, and are collateralized by a restricted \$2.0 million certificate of deposit. The interest rate under the agreement is based on the LIBOR fixed rate, which was 4.28% at year-end. The total amount available for further advance to the Company was \$33,000 under the Agreement at December 31, 2004. The line expires on June 30, 2005, but the Company anticipates that the line will be renewed in 2005. However, if the Company does not extend the line of credit, the Company believes that it has adequate funds to meet all of its current obligations for the balance of 2005.

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7. Accounts Payable and Accrued Expenses

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

	2004	2003
Accrued expenses	\$ 436,000	\$ 305,000
Book overdraft	61,000	161,000
Accounts payable	997,000	1,252,000
	<u>\$ 1,494,000</u>	<u>\$ 1,718,000</u>

8. Stockholder Equity

Private Placements

On February 18, 2004, warrants for 500,000 shares of Common Stock were exercised at \$6.90625 per share, compared to the then current market price of \$6.76 per share, by an institutional investor, and the expiration date of the remaining 585,973 warrants was extended until February 25, 2008, at an exercise price of \$7.00 per share of common stock.

In connection with the above, the investor has agreed that it will not exercise any of the warrants to the extent that it would acquire shares of Common Stock exceeding 9.9% of the outstanding Common Stock nor will it knowingly sell shares to anyone to the extent that their holding in the Company would exceed 4.9% of the outstanding Common Stock.

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 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, 2007. During 2004, 2003, and 2002, 60,000, 407,800, and 422,800 options were granted under the Plan, respectively. At December 31, 2004, 295,600 options were available for grant under the Plan. An additional 14,000 and 6,000 options were granted outside the Plan in 2003 and 2002, respectively. Activity for the three years ended December 31, 2004, for all option grants is shown below:

	2004 Shares	2004 Weighted Average Exercise Price	2003 Shares	2003 Weighted Average Exercise Price	2002 Shares	2002 Weighted Average Exercise Price
Outstanding at beginning of year	653,650	\$ 7.97	911,475	\$ 7.52	654,575	\$ 7.18
Granted	60,000	\$ 5.98	421,800	\$ 7.76	428,800	\$ 7.77
Exercised	—	\$ —	(74,025)	\$ 6.15	(47,375)	\$ 6.57
Expired or forfeited	(35,850)	\$ 7.36	(605,600)	\$ 7.36	(124,525)	\$ 6.98
Outstanding at end of year	<u>677,800</u>	<u>\$ 7.82</u>	<u>653,650</u>	<u>\$ 7.97</u>	<u>911,475</u>	<u>\$ 7.52</u>
Exercisable at end of year	345,822		305,404		165,700	

Price range of options

Outstanding	\$ 2.25-\$10.51	\$ 2.25-\$10.51	\$ 2.25-\$10.51
Exercised	\$ —	\$ 5.78-\$6.44	\$ 5.78-\$7.13
Expired or forfeited	\$ 6.00-\$9.55	\$ 5.78-\$9.55	\$ 4.06-\$9.55

The following table summarizes information with respect to stock options outstanding at December 31, 2004:

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Range of Exercise Price	Number of Options Outstanding at 12/31/04	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price
\$2.25-\$4.99	85,000	3.1	\$ 4.23
\$6.35-\$7.84	167,450	2.8	\$ 6.70
\$8.09-\$10.51	425,350	5.0	\$ 8.98
	<u>677,800</u>		

The following table summarizes information with respect to stock options exercisable at December 31, 2004:

Year of Option Expiration	Number of Options	Weighted Average Exercise Price	Price Range
2005	39,850	\$ 6.55	\$6.44-\$7.08
2006	27,198	\$ 9.73	\$9.55-\$10.51
2007	71,894	\$ 6.32	\$2.25-\$10.51
2008	181,886	\$ 8.39	\$6.35-\$8.67
2009	—		
2010	—		
2011	25,000	\$ 8.70	\$8.70
All Years	<u>345,828</u>		

The Company used the following values for the Black-Scholes calculation used to measure the fair value of stock-based compensation in accordance with SFAS 123.

	2004	2003	2002
Expected life (years)	4	4-6	4-6
Risk-free interest rate	4.28%	3.12%	4.25%
Volatility	66.8%	55.3%	73.1%
Dividend yield	0%	0%	0%
Weighted average remaining contractual life (years)	4.2	4.6	7.3
Weighted average fair value at date of grant	\$ 3.22	\$ 3.23	\$ 5.05

Treasury Stock Transactions

During 2004, the Company purchased 18,950 shares of Common Stock at a total cost of \$74,352. No treasury transactions were conducted in 2003.

9. Income Taxes

There were no tax expenses for the years 2004, 2003, and 2002 as a result of net losses and the net operating loss carryforwards.

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The tax effect of significant temporary differences representing deferred tax assets as of December 31, 2004 and 2003, is as follows:

	2004		2003	
	Current	Non-Current	Current	Non-Current
Property and equipment	\$ —	\$ (901,473)	\$ —	\$ (622,623)
Deferred rent	65,876	—	59,570	—
Accrued vacation	55,600	—	24,841	—
Allowance for doubtful accounts	5,793	—	7,724	—
Deferred revenue	—	13,375	—	—
Net operating loss carryforward	—	6,612,253	—	5,286,427
Accrued bonus	—	48,646	—	47,370
Other	(10,192)	—	(12,761)	—
	<u>117,077</u>	<u>5,772,801</u>	<u>79,374</u>	<u>4,711,174</u>
Valuation allowance	<u>(117,077)</u>	<u>(5,772,801)</u>	<u>(79,374)</u>	<u>(4,711,174)</u>
Deferred tax asset	\$ —	\$ —	\$ —	\$ —

Approximately \$3.4 million in U.S. tax net operating losses was created in 2004. The Company has \$17.1 million in net operating loss carryforwards that will be available to offset regular taxable U.S. income during the carryforward period, which will begin to expire in 2018. Based on the Company's loss in 2004 and its accumulated deficit, the Company has provided a full valuation allowance against the net deferred tax asset. During fiscal year 2004, the Company increased the allowance in the amount of \$1.1 million to fully reserve the net deferred tax asset at December 31, 2004. At December 31, 2004,

approximately \$388,000 of the valuation allowance, related to benefits from stock compensation, will be credited to "paid in capital" when recognized in future periods.

Reconciliation between actual tax expenses and taxes computed at the statutory Federal rate of 34 percent for 2004, 2003, and 2002 are as follows:

	2004	2003	2002
U.S. Federal income tax rate at 34%	\$ (959,495)	\$ (767,302)	\$ (993,455)
State taxes, net of federal tax benefit	(130,378)	(104,263)	(134,993)
Change in valuation allowance	1,099,331	883,014	1,136,030
Expenses not deductible for tax purposes	13,269	34,448	31,750
Valuation allowance related to stock compensation	—	(45,818)	(34,006)
Adjustment for prior year taxes	(22,727)	(79)	(5,326)
Income tax provision (benefit)	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

10. Commitments and Contingencies

Government Contracts

The principal portion of the Company's revenue has been generated under government contracts, by the InfoSpherix Division. These contracts are awarded pursuant to a competitive bidding process. As of December 31, 2004, none of the Company's contracts were under protest. The Government has the right to audit billings and Spherix does not expect adjustments to the billings.

Leases

The Company has various commitments under capital and operating leases through 2009 relating to office equipment, its call

center facility in Cumberland, Maryland, its call center facility in Rapid City, South Dakota, its call center and administrative offices in Beltsville, Maryland, and its research lab and administrative office in Annapolis, Maryland.

Future minimum rentals as of December 31, 2004, under noncancellable leases are as follows:

Year Ending December 31,	Capital Leases	Operating Leases
2005	\$ 30,028	\$ 912,013
2006	27,059	903,425
2007	16,537	895,804
2008	—	706,202
2009	—	149,388
Thereafter	—	—
	<u>73,624</u>	<u>\$ 3,566,832</u>
Less: executory costs	24,340	
Less: amount representing interest	3,705	
Capital lease obligations	45,579	
Less current portion	18,124	
Long-term obligations	<u>\$ 27,455</u>	

These future minimum rentals do not include consumer price index (CPI) adjustments to which some of the leases are subject. The Company incurred rental expenses of \$860,000 in 2004, \$659,000 in 2003, and \$645,000 in 2002, under operating leases.

Related Party Transactions

Employment, Deferred Compensation, and Consulting Agreements for Principal Stockholders

Dr. Gilbert V. Levin, Company founder and former CEO, has served under an Employment Agreement since March 3, 1969. This Agreement was amended and restated in 2004, and continued through December 31, 2004. On February 17, 1993, the Company entered into agreements with the Principal Stockholders, Dr. Gilbert V. Levin and Mrs. M. Karen Levin, to provide adequate retirement benefits and to protect the Company's stock from a precipitous sale to pay estate taxes upon their deaths. These agreements provided that, upon retirement, under a Supplemental Executive Retirement Plan (SERP), these individuals would receive deferred compensation equal to 70% and 60% of their average annual total compensations less the assumed returns from investment of their funded pension plans, and less their social security payments. The deferred compensation plan for Gilbert V. Levin was unfunded, and, at March 23, 2004, the Company had no liability under the plan. On March 23, 2004, Dr. Gilbert V. Levin voluntarily forgave the Company its obligations under his SERP agreement. The deferred compensation plan for M. Karen Levin is unfunded, and at December 31, 2004, the Company had no liability under the plan as actuarially determined. The SERP for Mrs. Levin at present has zero liability. The Company also agreed to fund long-term lifetime healthcare and health insurance policies for them. At December 31, 2004, the Company's liability was estimated to be \$126,000. Upon completion of their employment, the officer-stockholders agree to serve as consultants to the Company on an as-needed basis, at a specified daily rate. In addition the Company will provide lifetime payments of \$12,500 each quarter to Dr. Levin following his full retirement from the Company. In 2004, Dr. and Mrs. Levin voluntarily forgave the Company its obligation to retain key man life insurance on Dr. and Mrs. Levin and to buy back stock from the last to survive. On March 23, 2004, after lengthy consideration and consultation, the Board and Dr. Levin approved new agreements in contemplation of such time as the Company's founder and former CEO fully retires.

The Company entered into an employment agreement with its Founder and Chair, who is a Principal Stockholder, that provides for certain benefits should he be terminated within the terms of the agreement for other than

specific reasons. Benefits to be provided under this agreement include continued life, disability, accident and health insurance and severance payments equal to his annual base compensation through the term of the agreement. The agreement expired December 31, 2004.

Deferred Rent

The Company entered into leases for its Beltsville, Cumberland and Annapolis facilities in 1997, 2003 and 2004, respectively. The excess of the rent expense over the cash payments for rent is recorded as deferred rent and is being amortized over the life of the leases.

Deferred Revenue

On September 27, 1996, the Company signed an exclusive worldwide licensing agreement with MD Foods Ingredients a/s (MDFI) of Denmark (now Arla Foods Ingredients a/s "Arla") for the use, manufacture and sale of Spherix's low-calorie sugar, tagatose, as a sweetener in foods. The Company received a non-refundable \$750,000 initial partial payment on signing. This \$750,000 was classified as licensing revenue in the 1996 financial statements. The Company received an additional payment of \$1,750,000 on January 6, 1997, subsequent to the successful completion of MDFI's due diligence. The first \$750,000 of the \$1,750,000 received on January 6, 1997, completes the initial non-refundable payment, and was classified as licensing revenue in the first quarter of 1997. The remaining \$1 million of the \$1,750,000 was classified as deferred revenue as this represented a non-refundable advance against future royalties, recoverable and to be recognized as revenue, at the rate of 50% of such annual royalties. On November 13, 2003, the Company entered into a settlement agreement with Arla, which resulted in the immediate recognition of the \$1 million previously classified as deferred revenue, without any amount to be used to offset future royalties.

Other

On May 23, 2002, the Company filed for arbitration against its licensee, Arla Foods a/s. The filing sought damages for what the Company claims has been an unreasonably long time for its licensee to bring tagatose to market and other measures to accelerate the pace toward commercialization of food and beverage uses of the new sweetener licensed to the Danish firm, and for favorable interpretation of License Agreement clauses affecting royalty payments and other issues. On November 13, 2003, the Company entered into a settlement agreement with Arla that materially extended the fee payment period at rates equaling the high-end royalties and provided that Arla supply Spherix with tagatose for Naturlose uses. The Company, accordingly, settled its arbitration proceeding. The Company incurred approximately \$1.5 million in related legal expenses in the years 2002 and 2003.

In December 2002, the National Park Service ("NPS") cancelled the re-procurement for the National Park Reservation System for which the Company had submitted its bid. The Company has operated this program for seven years, and revenue recognized was \$3.9 million and \$4.2 million for the years ended December 31, 2004 and 2003, respectively, or 17% and 23% of total revenues for each year. NPS informed the Company that the U.S. Office of Management and Budget had ordered NPS to non-competitively bundle this program with the U.S. Forest Service's National Recreation and Reservation System contract ("NRRS"). The Company believed this action to be contrary to Federal procurement regulations. On June 26, 2003, the court of Federal Claims notified the Company that the Government decided not to sole source the National Park Service Reservation System to the competition. Instead, a competitive procurement was issued in the spring of 2004 for the combined NPS and NRRS. In August 2004, this procurement was awarded to a competitor. Spherix protested this award and in December 2004, the Government Accountability Office sustained our protest citing numerous flaws in the agency's handling of the procurement. The procurement was subsequently reopened and Spherix has resubmitted its proposal. Meanwhile, the NPS contract has been formally extended through September 2005. The Company incurred approximately \$200,000 and \$400,000 in related legal expenses in 2004 and 2003, and expects to receive approximately \$100,000 from the government as a partial offset to legal costs incurred in the award protest.

11. 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 \$105,000, \$89,000, and \$97,000 in 2004, 2003, and 2002, respectively.

12. Employee Stock Purchase Plan

On May 15, 2003, the Company approved an Employee Stock Purchase Plan whereby the employees could purchase shares of the Company's stock. The Plan is authorized to initially issue up to 500,000 shares of common stock, with additional amounts determined annually based on the terms of the Plan. The Plan became available to the employees on January 1, 2004. In 2004, 1,796 shares were issued under the plan. The Board of Directors has subsequently voted to discontinue the plan effective June 30, 2005.

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. The Company is managed along two business segments, InfoSpherix and BioSpherix.

	Year Ended December 31, (Dollars in thousands)		
	2004	2003	2002
Revenues			
InfoSpherix	\$ 22,221	\$ 17,054	\$ 15,043
BioSpherix	127	1,032	89
Total revenues	<u>\$ 22,348</u>	<u>\$ 18,086</u>	<u>\$ 15,132</u>
Operating Loss and Loss Before Income Taxes			
InfoSpherix	\$ (2,051)	\$ (787)	\$ (1,239)
BioSpherix	(794)	(1,488)	(1,764)
Total operating loss	(2,845)	(2,275)	(3,003)
Interest income (expense), net	23	18	81
Loss from operations before income taxes	<u>\$ (2,822)</u>	<u>\$ (2,257)</u>	<u>\$ (2,922)</u>
Identifiable Assets			
InfoSpherix	\$ 8,012	\$ 5,688	\$ 5,195
BioSpherix	196	138	384
General corporate assets	7,036	8,341	9,874
Total assets	<u>\$ 15,244</u>	<u>\$ 14,167</u>	<u>\$ 15,453</u>
Capital Expenditures			
InfoSpherix	\$ 2,941	\$ 2,485	\$ 770
BioSpherix	44	5	14
General corporate assets	17	27	299
Total capital expenditures	<u>\$ 3,002</u>	<u>\$ 2,517</u>	<u>\$ 1,083</u>
Depreciation and Amortization			
InfoSpherix	\$ 2,101	\$ 1,315	\$ 1,390
BioSpherix	24	27	25
General corporate assets	153	161	178
Total depreciation and amortization	<u>\$ 2,278</u>	<u>\$ 1,503</u>	<u>\$ 1,593</u>

During 2004, InfoSpherix recognized revenue from three of its customers, all of which were government agencies, representing 21%, 17%, and 13% of the total Company revenues. During 2003, InfoSpherix recognized revenue from three of its customers, all of which were government agencies, representing 31%, 23%, and 16% of the total Company revenues. During 2002, InfoSpherix recognized revenue from three of its customers, all of which were government agencies, representing 35%, 27%, and 19% of the total Company revenues. Government contracts accounted for 99%, 95%, and 94% of the InfoSpherix revenue in 2004, 2003 and 2002, respectively.

BioSpherix has invented and patented for the Company the use of tagatose as a low-calorie sweetener. In 1996, the Company signed an exclusive worldwide licensing agreement with MD Foods Ingredients (MDFI) of Denmark for the use, manufacture and sale of Spherix's low-calorie sugar, tagatose, as a sweetener (see Note 10 "Commitments and Contingencies"). In 2000, MDFI was merged into Arla Foods.

Operating loss consists of revenue less operating expenses. In computing operating profit, interest expense and income taxes were not considered. Operating loss for InfoSpherix was \$2.1 million (9% of InfoSpherix revenue) for 2004.

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. Selected Quarterly Information (in thousands, except per share data), unaudited

The table below sets forth selected unaudited financial information for each quarter of the last two years.

	Quarter Ended			
	March 31,	June 30,	September 30,	December 31,
2003				
Revenue	\$ 4,421	\$ 4,802	\$ 5,092	\$ 3,772
Gross profit	\$ 1,268	\$ 1,642	\$ 1,954	\$ 998
Net (loss) income	\$ (687)	\$ (453)	\$ (115)	\$ (1,002)
Net (loss) income per share, basic	\$ (0.06)	\$ (0.04)	\$ (0.01)	\$ (0.09)
Net (loss) income per share, diluted	\$ (0.06)	\$ (0.04)	\$ (0.01)	\$ (0.09)
2004				
Revenue	\$ 5,053	\$ 6,761	\$ 7,091	\$ 3,443
Gross profit	\$ 1,218	\$ 2,261	\$ 2,196	\$ (689)
Net (loss) income	\$ (547)	\$ 192	\$ 294	\$ (2,761)

Net (loss) income per share, basic	\$	(0.05)	\$	0.02	\$	0.02	\$	(0.23)
Net (loss) income per share, diluted	\$	(0.05)	\$	0.02	\$	0.02	\$	(0.23)

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

None.

Item 9A. CONTROLS AND PROCEDURES

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 annual report.

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

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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.

Periodic Evaluation and Conclusion. 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 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. There were no significant changes in the Company's internal controls or in other factors that could significantly affect these controls subsequent to the date of the evaluation.

Item 9B. OTHER INFORMATION

There was no information required to be disclosed on Form 8-K during the fourth quarter of 2004, which was not so disclosed.

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Spherix Incorporated

PART III

Items 10 through 14.

Information required by Part III (Items 10 through 14) of this Form 10-K is incorporated by reference to the Company's definitive Proxy Statement for the Annual Meeting of Stockholders for the fiscal year ended December 31, 2004, which will be filed with the Securities and Exchange Commission not later than 120 days after the end of the fiscal year to which this report relates.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENTS, SCHEDULES AND REPORTS ON FORM 8-K

(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)
- (10.1) Summary of Annual Compensation of Members of the Board of Directors of Spherix Incorporated
- (10.2) Amended and Restated Supplemental Executive Retirement Plan Agreement dated as of May 15, 2002, by and between M. Karen Levin and the Company (incorporated by reference to Form 10-K filed March 26, 2003)
- (10.3) 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)

- (10.4) Consulting Agreement dated as of February 17, 1993, by and between M. Karen Levin and the Company (incorporated by reference to Form 10-KSB filed March 31, 1993)
- (10.5) Amended and Restated Employment Agreement dated as of March 23, 2004, by and between Gilbert V. Levin and the Company (incorporated by reference March 30, 2004)
- (10.6) Stock Purchase Warrant dated as of February 24, 2000 (incorporated by reference to Form 8-K filed March 3, 2000)
- (10.7) 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)
- (10.8) Securities Purchase Agreement dated as of February 24, 2000, by and between the Company and RGC International Investors, LDC, c/o Rose Glen Capital Management, L.P. (incorporated by reference from Form 8-K filed March 3, 2000)
- (10.9) 1997 Stock Option Plan (incorporated by reference from the Company's Proxy Statements for its May 1998 and May 2001 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 from Form 8-K filed in March 2001)
- (10.11) 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)
- (10.12) G.V. Levin Exit Agreement Resolution approved by the Board of Directors on March 23, 2004
- (23) Consent of Independent Registered Public Accounting Firm
- (31) Certification of Chief Executive Officer and Chief Financial Officer of Spherix Incorporated pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- (32) Certification of Chief Executive Officer and Chief Financial Officer of Spherix Incorporated pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

(b) Reports on Form 8-K

On November 10, 2004, the Company filed a Form 8-K reporting its results of operations for the period ended September 30, 2004.

On December 7, 2004, the Company filed a Form 8-K announcing that it had won its protest of the National Recreation Reservation Service contract award.

SIGNATURES

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

Spherix Incorporated
(Registrant)

Date: March 29, 2005

By: /s/ Richard C. Levin
Chief Executive Officer and President,
and Chief Financial Officer

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.

<u>/s/ Gilbert V. Levin</u> Gilbert V. Levin	Chair, Executive Officer for Science	March 29, 2005
<u>/s/ Lionel V. Baldwin</u> Lionel V. Baldwin	Director	March 29, 2005
<u>/s/ Douglas T. Brown</u> Douglas T. Brown	Director	March 29, 2005
<u>/s/ A. Paul Cox, Jr.</u> A. Paul Cox, Jr.	Director	March 29, 2005
<u>/s/ George C. Creel</u> George C. Creel	Director	March 29, 2005
<u>/s/ M. Karen Levin</u> M. Karen Levin	Director, Vice President for Communications	March 29, 2005
<u>/s/ Robert J. Vander Zanden</u> Robert J. Vander Zanden	Director	March 29, 2005

Spherix Incorporated**SUMMARY OF ANNUAL COMPENSATION OF MEMBERS OF
THE BOARD OF DIRECTORS OF SPHERIX INCORPORATED**

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

- Annual retainer of \$2,000;
 - Fees of \$1,200 for each meeting of the Spherix board and each in-person Spherix committee meeting attended not in conjunction with a board meeting; and
 - Stock option for shares of Spherix common stock with an exercise price equal to the closing price on the date of grant. The number of option shares grant annually is typically between one thousand and two thousand for each director; however, in 2004 no options were granted to the Directors.
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Spherix Incorporated

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the registration statements of Spherix Incorporated on Form S-8 (File No. 333-66053) and on Forms S-3 (File No. 333-44973, 333-79593 and 333-32504), of our report dated February 24, 2005, on our audit of the financial statements of Spherix Incorporated as of December 31, 2004, and for each of the three years ended December 31, 2004, 2003 and 2002, which report is included in this Annual Report on Form 10-K.

/s/ Grant Thornton LLP

Vienna, Virginia
March 28, 2005

Spherix Incorporated**Certification of
Chief Executive Officer and Chief Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Richard C. Levin, Chief Executive Officer and President, and Chief Financial Officer, certify that:

1. I have reviewed this annual report on Form 10-K of Spherix Incorporated;
2. Based on my knowledge, this annual 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 annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual 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 annual report;
4. The registrant's other certifying officers 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)) 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 annual report is being prepared;
 - b) 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
 - c) 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(s) 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/ Richard C. Levin
Richard C. Levin
CEO and President and Chief
Financial Officer
March 29, 2005

Spherix Incorporated**Certification of
Chief Executive Officer and Chief Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

I, Richard C. Levin, Chief Executive Officer and President, and Chief Financial 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, 2004 (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/ Richard C. Levin

Richard C. Levin

CEO and President and Chief
Financial Officer

March 29, 2005

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.
