

**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, 2002

**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**

(formerly Biospherics 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:

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
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 28, 2002, 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 \$50,602,554

There were 11,351,057 shares of the Registrant's Common Stock outstanding as of March 17, 2003.

**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.

## PART I

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 name change from Biospherics Incorporated to Spherix Incorporated was approved at the Shareholder Meeting on May 15, 2001. The Company consists of a biotechnology division (“BioSpherix”) and an information services division (“InfoSpherix”). InfoSpherix consists of Commercial Information Services (“CIS”), Government Information Services (“GIS”), and Information Technology Services (“ITS”).

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 (formerly BINC).

#### **Available Information**

Our principal Internet address is [www.spherix.com](http://www.spherix.com). We make available free of charge on [www.spherix.com](http://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 the Company’s biotechnology research and development arm, dedicated to developing proprietary products and services with a view toward economic commercial applications. The Company has accumulated a number of patents on its products.

Tagatose as a Low-Calorie Bulk Sweetener. BioSpherix has patented the use of a naturally occurring sugar, tagatose, as a full-bulk, low-calorie sweetener. It is a true sugar that looks, feels, and tastes like table sugar. Tagatose is present in small amounts in a number of foods, including dairy products. The Company has been developing the product since receiving a U.S. patent for its use as a low-calorie sweetener in 1988, which expires August 29, 2006, and two U.S. patents for its production process in 1991 and 1992, which expire July 19, 2009, and March 25, 2011, respectively.

In January 1997, the Company completed a license agreement with 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 a royalty schedule based upon net sales of the sugar for these purposes over the life of the patents, with payments continuing beyond as discussed below. In addition, MDFI has a right of first refusal to manufacture tagatose for use in or as a drug should Spherix, or a third party licensee of Spherix, develop and sell tagatose as a drug. Spherix retains all other rights to sell tagatose, including drug use rights and rights to the use of tagatose as a sweetener or other functional ingredient in drugs and cosmetics such as toothpaste and mouthwash. Spherix has patented the use of tagatose in treating Type 2 diabetes and other uses in health and medicine

See accompanying notes to financial statements.

---

as outlined below. In 2000, MDFI merged with the Swedish dairy and food products company, Arla, to form Arla Foods Ingredients (“Arla”). Arla manufactures a wide variety of dairy products, foods and food ingredients. The company 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. Whey is the raw material for making tagatose. Arla has stated that its resources for tagatose have been increased by the merger.

Total non-refundable payments of \$2.5 million received from MD Foods included a \$1 million advance against future royalties. The Company will receive running royalties on commercial sales of tagatose. Royalties are payable to the Company from Arla under the above-described license agreement and payments will continue for the lifetimes of relevant existing or new U.S. patents, plus five years at a lesser rate.

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, but has no authority to enforce such recommendations.

Arla plans to enter tagatose into the U.S. sweetener market first. A panel of experts retained by Arla declared tagatose as Generally Recognized As Safe (“GRAS”) on April 11, 2001, permitting sale of tagatose 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. Arla reports that it has begun the approval process for tagatose in Japan, major European countries, New Zealand, Australia, and other countries. Arla also reported to the Company that the U.S. FDA approved Arla’s recommended caloric value of 1.5 kilocalories per gram, permitting labeling as such. This value will permit products containing tagatose to be termed “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 and intends to seek approval for such.

In 2002, Arla announced a 50/50 joint venture with Nordzucker, a German sugar producer selling to Eastern Europe, for the manufacture and sale of tagatose. Arla now states that the first tagatose plant is being completed at the Nordzucker site, and that it will begin commercial production in April or May 2003. Arla also states that if market acceptance is favorable, a tagatose plant will be established in connection with Arla Foods' dairy plant in Taulov, Denmark.

The Company believes that tagatose will fill a market not currently accessible to other sweetener products and 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 pre-biotics, 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 government approval to carry the label "not promoting 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.

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 obtained a Japanese patent (2000) on the method for the manufacture of tagatose it had patented in the U.S. The Company believes this protection of its method to be significant because of the large potential market for tagatose in Japan. The rights were conveyed to the Company's licensee of tagatose for food use.

The Company obtained a Finnish patent (2001) on the method for the manufacture of tagatose it had patented in the U.S. The Company believes this protection of its method to be significant because of the potential market for tagatose in Finland. The rights were conveyed to the Company's licensee of tagatose for food use.

Over the years, the Company has repeatedly expressed its concerns to Arla Foods about its perception of the slow pace and delays in the commercialization of tagatose by Arla. Further, from time to time the Company and Arla

See accompanying notes to financial statements.

have disagreed over the interpretation of certain provisions of the License Agreement. In 2002, Spherix filed a Notice of Arbitration against Arla under the terms of its License Agreement with that firm. Spherix seeks monetary damages and possible recovery of all the rights it licensed to Arla. The arbitration process is progressing. The Company believes it has good grounds for its claims, but, as in all such disputes, the result cannot be predicted. The Company has offered to negotiate a settlement of its claims, but efforts to date have been unsuccessful, and the arbitration process, perhaps taking another year or more, continues.

Any delays in the commercialization process consume the patent life of tagatose, as well as the time royalties are payable by Arla under the License Agreement. Arbitration notwithstanding, the Company has and will continue to insist that Arla accelerate its commercialization activities in order to maximize royalties payable to the Company.

Meanwhile, the Company has decided to pursue the non-food uses of tagatose under its new brand name, "Naturlose™". Products could include toothpaste, mouthwash, cosmetics, over-the-counter drugs and pharmaceutical drugs. Spherix has been negotiating to obtain its own sources of production for Naturlose, and has begun a sales effort to interest healthcare product manufacturers. As part of that effort, it designed and had pilot-tested a more economical manufacturing process especially tailored to the Naturlose market. The test was successful and plans are underway to develop sample quantities and then commercial supply. The Company has funded an unrestricted grant for a pilot plant trial at a major university. This may lead to a formal agreement for further studies and production of Naturlose. Other potential sources are being pursued.

Among the tagatose rights retained by Spherix that can be exploited as Naturlose are:

Treatment for Type 2 Diabetes. The Company has patented the use of tagatose as a treatment against Type 2 diabetes (1995). 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, accommodated in about two weeks, no untoward effects were found in any of the research. In addition, the studies found that doses of tagatose, in the range of 10 to 75 grams per day, 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 normally expected rise in blood glucose.

Anti-hyperglycemic Agent. The Company has patented the use of tagatose as an anti-hyperglycemic agent to prevent the formation of advanced glycosylation end-products, which is one of the major causes of aging (1994).

GRAS Obtained for Use as Sweetener in Drugs. In the year 2000, the Company achieved GRAS status for the use of tagatose as a sweetener (excipient) in drugs for non-chronic use by adults and children.

GRAS Obtained for Use in Toothpaste, Mouthwash and Other Cosmetics. In the year 2000, the Company achieved GRAS status for the uses of tagatose in toothpaste, mouthwash, lipstick and other cosmetic products.

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. The Company has received a patent for the use of tagatose against anemia and hemophilia (1999).

Increased Fertility and Improved Fetal Development Drug. The Company obtained a patent (2001) on the use of tagatose to 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. The Company obtain a patent in 2002 for the use of tagatose in the transplanting and storage of human organs to protect against cyto-oxidation and toxic chemicals.

The drug uses mentioned above require regulatory approval.

Other Spherix patent rights include:

Method for Extending Lifetimes of Biodegradable Products. The Company has filed for patents on a method to prevent or delay microbial degradation of a wide variety of products such as fragrances, lotions, sun blocks and the like.

See accompanying notes to financial statements.

4

---

Safe-or-Humans Pesticides. Sale of "FlyCracker®" for use in barns, pens, food processing plants, and other enclosed spaces began in March of 2000. The active ingredient for this patented safe-for-humans pesticide is "food grade." It was developed for use against house flies, on which testing has been concentrated, but additional susceptible insects may include other types of flies, ants, mites, mosquitoes, and related insects. Safe pesticides were invented by the Company in response to the Environmental Protection Agency's ("EPA") initiative urging the development of alternatives to the "hard chemical" pesticides commonly used in agriculture and animal husbandry. These chemicals are reported to be carcinogenic or otherwise toxic to humans, and pose a risk to consumers of food products containing traces, leading to their ban in some countries. The increasing concern over pesticide hazards in foods and the general environment indicates a market for an economical and effective product that poses no human or environmental threat. On January 12, 2001, the Organic Materials Review Institute ("OMRI") accepted the Company's application to list FlyCracker as "allowed" for use in organic livestock production farms, permitting the Company to sell FlyCracker under the "organic" label. To date, the Company has marketed FlyCracker principally through distributors. The Company is considering attempting to license the right to sell Flycracker in an effort to increase the lagging pace of sales.

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 using funds generated by its InfoSpherix Division. Funds have also been raised from private placements of Company stock and warrants, the proceeds of which have been principally dedicated to increase the state of development, market penetration and sales of the products mentioned. The Company has currently earmarked \$5 million for these purposes.

BioSpherix accounted for 1% of the Company's total revenue in 2002.

## **InfoSpherix Division**

### **Commercial Information Services**

CIS's professional staff 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.

### **Government Information Services**

GIS's information professionals design and operate information centers providing information management and materials to the public on various socially beneficial subjects, as well as other information services, such as reservation 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 information 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 information centers (Beltsville and Cumberland, MD) that efficiently manage and track high volumes of data. Coupling GIS's expert staff with its advanced technologies results in an efficient and effective system to collect and disseminate large amounts of information.

In 2002, the National Park Service ("NPS") contract accounted for approximately \$4.1 million in revenue or 27% of the total revenue for the year. In December 2002, NPS gave the Company notice of cancellation of the procurement for the National Park Reservation System. NPS informed the Company that the U.S. Office of Management and Budget had ordered NPS to non-competitively bundle this program with the National Forest Service's

See accompanying notes to financial statements.

5

---

National Recreation and Reservation System contract. Believing it to be illegal, the Company is contesting this action. The Company's current contract with the NPS is scheduled to expire June 30, 2003.

Late in 2002, the Company began performing on two new government contracts with the Office of Personnel Management and the Indiana Department of Natural Development. Collectively, these contracts are expected to generate approximately \$2.6 million in revenue annually.

CIS and GIS accounted for 5% and 94% of the Company's total revenues in 2002, respectively. While contracts are numerous, 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.

#### Information Technology Services

ITS provides internal and external technical services including software engineering, telecommunications, network infrastructure, web development, and all other services of a computer or information systems technology nature. ITS has engineered the Computer Telephony Integration ("CTI") System, ReserveSuite, HealthSuite, and InfoSuite that have been used to deliver services via CIS and GIS. Historically and strategically, services and products of ITS are utilized and/or delivered via CIS and GIS. Spherix has strengthened its information technology stance via partnerships with Oracle Corporation and Microsoft in the areas of software and database engineering, as well as network engineering and implementation. ITS focuses on commercial and government business of an information technology nature, providing consulting, integration, and support services, as well as product development, both internally and commissioned. ITS has provided industry award-winning E-Business solutions, a core competency exploited on the majority of its endeavors.

#### Government Contracts

See Note 8, "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 10, "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 2002, 2001, and 2000, InfoSpherix contributed 99%, 100%, and 99% of total Company revenue. The Company's business operations are usually dependent upon substantial revenue from a select group of customers. In 2002, 2001, and 2000, revenue from the following customers accounted for more than 10% of total Company revenues:

2002	2001	2000
U.S. Government	U.S. Government	U.S. Government
State of Michigan	State of Michigan	Pfizer
State of Maryland	State of Maryland	McKesson HBOC-PPG

It is currently expected that revenue from the U.S. Government, the State of Michigan, and the State of Maryland will each account for more than 10% of total Company revenues in 2003.

See accompanying notes to financial statements.

#### Patents and Trademarks

The Company has established a strong worldwide patent position for tagatose. These patents include an economical process for the manufacture of tagatose. The Company's 1988 U.S. patent for the use of tagatose as a low-calorie sweetener/bulking agent, which expires August 29, 2006, has subsequently been obtained or filed in many countries. The Company developed a proprietary method for manufacture of tagatose that is protected by two U.S. patents, issued in 1991 and 1992, which expire July 19, 2009, and March 25, 2011, also filed in many other countries.

In March 2002, a U.S. patent was awarded the Company for the use of tagatose in preserving human transplant organs.

In 2002, a patent application was filed for chewing gum containing tagatose as an anti-biofilm agent.

In 2002, a patent application was filed for use of tagatose in fiber laxatives.

In May 2001, patent coverage was received for the use of tagatose in improving fertility and fetal development.

In April 2001, a Finnish patent was awarded to the Company for its process to manufacture tagatose.

In 2001, a patent application was filed for use of tagatose in promoting cardiovascular health.

In 2001, a patent application was filed for the use of tagatose as an anti-biofilm agent.

In October 2000, a Japanese patent was awarded to the Company for its process to manufacture tagatose.

In January 2000, patent coverage was received for use of tagatose in treating anemia and hemophilia. Other patents for health uses of tagatose are pending.

In 1999, a patent application was filed for a method to increase useful lifetimes of products subject to microbial degradation.

In November 1998, a U.S. patent was awarded to the Company for the use of tagatose as a low-calorie carbohydrate sweetener and bulking agent.

In September 1995, it received a patent for the use of tagatose in treating diabetes.

In October 1994, the Company received a patent for the discovery that tagatose is effective in reducing hyperglycemia, one of the principal causes of physical and mental aging.

In November 1992, a U.S. patent was awarded to the Company for its safe-for-humans pesticide, FlyCracker®. In November 1997, the Company received a U.S. patent on another safe-for-humans pesticide, WingDinger. The Company has also applied for foreign patents for these products.

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 are payable to the Company from Arla under the above-described License Agreement and are dependent upon relevant existing or new U.S. patents, plus five years at a lesser rate.

The Company has trademarked its name, "Spherix," and "ReserveWorld," its reservation system. The Company received a U.S. trademark for "FlyCracker" in 2001. It has applied for the trademark "Naturlose" for non-food uses of tagatose.

See accompanying notes to financial statements.

## 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, 2002 and 2001, were as follows (\$000s):

	December 31, 2002			December 31, 2001		
	Current	Non-Current	Total	Current	Non-Current	Total
GISD	\$ 15,321	\$ 15,977	\$ 31,298	\$ 12,687	\$ 7,502	\$ 20,189
CISD	674	—	674	60	—	60
BioSpherix	—	1,000	1,000	—	1,000	1,000
	<u>\$ 15,995</u>	<u>\$ 16,977</u>	<u>\$ 32,972</u>	<u>\$ 12,747</u>	<u>\$ 8,502</u>	<u>\$ 21,249</u>

The increased backlog between years is the result of two new government contracts and the extension of an existing government contract.

## 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. Over the past five years, the Company has invested over \$2 million in state-of-the-art CTI systems and over \$2 million in the development of specialized computer software products to improve its competitive position.

Competitors of BioSpherix are numerous and include, among others, major pharmaceutical, chemical, consumer, and biotechnology companies, specialized firms, universities and other research institutions. There can be no assurance that the Company's competitors will not succeed in developing technologies and products that are more effective than any that are being developed by the Company or that would 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.

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.

## Research and Development

BioSpherix expenditures for research and development were approximately \$476,000, \$390,000, and \$281,000 in 2002, 2001, and 2000, respectively. These expenditures were incurred primarily in the ongoing efforts to commercialize tagatose, including its development for drug uses, and to develop the Company's safe-for-humans pesticides. The Division has also begun development of its tagatose manufacturing process to improve its economics for the non-food uses retained by Spherix. Of its capital resources, the Company has earmarked some \$5 million for its commercialization of Naturlose, but has not obligated these funds to any contractual commitment as of year-end. Should additional funds become necessary, the Company will seek them from then appropriate sources.

See accompanying notes to financial statements.

## 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.

## 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 2002, the Company employed an average of 356 persons on a full- or part-time basis. Of this total, approximately 214 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 intends to introduce tagatose to U.S. markets first, prior to worldwide distribution. Sales of FlyCracker have occurred only in the U.S., but international sales may be pursued.

## Item 2. DESCRIPTION OF PROPERTY

In November 1997, the Company signed a new 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, research labs, warehousing, and call center operations for both InfoSpherix and BioSpherix segments. The Company currently leases approximately 16,000 square feet of space for its GIS telesupport services in Cumberland, Maryland.

Throughout 2002, the Company operated at approximately 43% and 69% of productive capacity at the Beltsville and Cumberland facilities, respectively.

## Item 3. LEGAL PROCEEDINGS

Information required by this Item 3 is included in Note 8 "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 2002 to a vote of security holders through solicitation of proxies or otherwise.

See accompanying notes to financial statements.

## **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 13, 2003, the number of shareholders of record of the Company's common stock was approximately 7,500. 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, 2002, as reported on the NASDAQ National Market System:

	<b>High</b>	<b>Low</b>
1st Quarter 2002	\$ 10.700	\$ 7.270
2nd Quarter 2002	\$ 8.050	\$ 5.170
3rd Quarter 2002	\$ 7.390	\$ 3.560
4th Quarter 2002	\$ 8.700	\$ 5.200
1st Quarter 2001	\$ 8.625	\$ 5.000
2nd Quarter 2001	\$ 11.400	\$ 6.750
3rd Quarter 2001	\$ 11.740	\$ 5.198
4th Quarter 2001	\$ 11.767	\$ 6.250

During 2002, warrants for the purchase of 250,000 and 325,000 shares, at \$6.50 and \$6.4005, respectively, of the Company's Common Stock were exercised, resulting in proceeds of \$3,705,163. Additional warrants for the purchase of 1,085,973 shares at \$6.91 are outstanding at December 31, 2002.

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 sell shares to anyone to the extent that their holdings in the Company would exceed 4.9% of the outstanding Common Stock.

The warrants 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 which acquired the warrants.

### Equity Compensation Plan Information

The following table provides information about the Company's common stock that may be issued upon the exercise of options and rights under all of the Company's existing equity compensation plans as of December 31, 2002 (all of which have been approved by the Company's stockholders), as well as rights to acquire shares of the Company's common stock granted to an unaffiliated investor pursuant to a warrant issued by the Company in connection with a private placement of securities and rights to acquire shares of Company common stock granted to the non-employee members of the Board of Directors of the Company.

See accompanying notes to financial statements.

10

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a) (#)	Weighted average exercise price of outstanding options, warrants and rights (b) (\$)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c) (#)
Equity compensation plans approved by security holders	888,475	\$ 7.53	68,750
Equity compensation plans not approved by securities holders	Options(1): 23,000 Warrants(2): 1,085,973	\$ 7.18 \$ 6.91	N/A
Total	1,997,448	\$ 7.19	68,750

(1) Consists of stock options issued to the Board of Directors.

(2) Consists of warrant issued to an unaffiliated institutional investor in connection with a private placement of securities.

### Item 6. SELECTED FINANCIAL DATA

	2002	2001	2000	1999	1998
Revenue	\$ 15,131,855	\$ 19,937,461	\$ 17,034,694	\$ 12,698,412	\$ 16,013,897
Net (loss) income	\$ (2,921,926)	\$ 567,823	\$ 591,070	\$ (5,205,097)	\$ (1,980,594)
Net (loss) income per share, diluted	\$ (0.26)	\$ 0.05	\$ 0.06	\$ (0.55)	\$ (0.23)
Total assets	\$ 15,453,140	\$ 13,240,928	\$ 13,451,258	\$ 8,555,609	\$ 11,634,238
Long-term debt obligations	\$ 90,530	\$ 104,190	\$ 358,411	\$ 1,490,765	\$ 2,229,664
Cash dividends declared per common share	\$ —	\$ —	\$ —	\$ —	\$ —
Stockholders equity	\$ 11,261,458	\$ 9,522,930	\$ 8,900,739	\$ 2,235,106	\$ 4,342,748
Working capital	\$ 8,787,502	\$ 7,139,196	\$ 6,357,594	\$ 60,899	\$ 277,964

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

#### Results of Operations<sup>3/4</sup>2002 Compared with 2001

The Company reported net loss of \$2,922,000 (\$0.26 per diluted share) on sales of \$15,132,000 for the year ended December 31, 2002, compared with a net income of \$568,000 (\$0.05 per diluted share) on sales of \$19,937,000 for the year ended December 31, 2001.

The Company operates via two (2) principal segments, InfoSpherix and BioSpherix.

See accompanying notes to financial statements.

11

### InfoSpherix

InfoSpherix revenue for 2002 was \$15,043,000 compared to \$19,881,000 in 2001, a decrease of \$4,838,000 (24%) between years.



Revenue from commercial contracts decreased by \$2,759,000 (78%) between years. The 2002 InfoSpherix loss principally resulted from this reduction in commercial revenue. Commercial contracts are typically for shorter terms than government contracts and that can result in substantial variations in commercial revenues. The prior year operations benefited from a significant short-term pharmaceutical contract, which was conducted in the third quarter of 2001. Commercial contracts are being actively pursued by the Company but the Company's recent history has been that contracts have been received on a sporadic basis.

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

	<u>For the Year Ended December 31</u>	
	<u>2002</u>	<u>2001</u>
Government	\$ 14,268	\$ 16,347
Commercial	775	3,534
	<u>\$ 15,043</u>	<u>\$ 19,881</u>

The Company's Federal Trade Commission ("FTC") contract concluded on January 11, 2002. In 2001, the FTC contract accounted for approximately \$2.3 million in revenue or 11% of the total revenue for the year. These losses were partially off-set by increases under the Maryland Information Center contract. The National Park Service Contract provided \$4,100,000 in revenue in 2002. Notice of cancellation of this contract has been provided but the Company is contesting this action. The NPS Contract has been extended through June 30, 2003, and the Company believes that it is likely to be extended even further. In October of 2002, the Company began work on a contract with the Office of Personnel Management; the total amount of the award is \$6,000,000 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 \$5,600,000 over four years.

The Company's business development group is targeting the commercial pharmaceutical market, the government information center and technology markets, and the ReserveSuite product and services market, for continued growth. Currently, the Company is bidding on contracts along these business markets, although no assurance can be given that these efforts will result in new business for the Company.

Certain of the Company's commercial contracts provide, from time to time, pharmaceutical and medical information for a specific drug or product. The success of a particular drug or product will often determine whether the Company's contract is extended or renewed. Sales and marketing efforts are directed to re-establish and increase the Company's share of commercial business in response to the high level of public interest in health information.

In 2001, the Company received approximately \$1.3 million in revenue and recognized a related expense of \$2.1 million, in settlement of a U.S. Department of Labor Administrative Review Board ("ARB") decision concerning the Company's liability for wages and fringe benefits under two contracts that the Company was awarded by the GSA, a Federal Government agency. Under the settlement agreement, GSA reimbursed the Company \$1.3 million for wages and fringe benefits (other related costs are not reimbursable), and the Company agreed to pay retroactive wages and benefits to certain labor categories in accordance with the Service Contract Act. These funds were disbursed on April 18, 2001, to the affected employees.

### **BioSpherix**

BioSpherix revenue for 2002 was \$89,000 compared to \$56,000 in 2001. The \$33,000 (59%) increase in revenue was as a result of increased sales of FlyCracker. Sales of FlyCracker were \$70,000 in 2002, compared to \$41,000 in 2001. Commercialization of Naturlose will focus on its use in toothpaste, mouthwash, over-the-counter

See accompanying notes to financial statements.

drugs, pharmaceuticals and other products to which the Company retains rights. The Company is exploring the possibility of entering a joint venture to produce commercial quantities of Naturlose to sell under Spherix's retained rights.

### **Research and Development**

Research and development costs for 2002 were \$476,000, compared to \$390,000 in 2001. The \$86,000 (22%) increase in expenses is directly related to a Naturlose pilot study on the core processing steps conducted in 2002. The study focused on an improvement in the chromatography system used in the product separation steps of the process, and addressed specific technical requirements for the intended uses of Naturlose.

### **Selling, General and Administrative**

Selling, general and administrative expense ("S,G&A") for 2002 was \$4,515,000 compared to \$4,029,000 in 2001, an increase of \$486,000 (12%). The increase between years is largely the result of legal fees incurred during 2002 related to the Arla arbitration.

### **Depreciation**

Depreciation and amortization expense for 2002 was \$1,593,000, compared to \$1,425,000 in 2001, resulting in an increase of \$168,000 (12%). The increase in depreciation reflects several significant purchases of software during 2002 and 2001 related to our reservation business and anticipated growth in the commercial business to increase efficiency and call volume, which are being depreciated over a three-year period.

### **Interest**

Interest income (expense), net, in 2002 was \$81,000, compared to \$114,000 in 2001. The \$33,000 (29%) decrease was the result of declining interest rates between years.

### **Sales Backlog**

The Company's sales backlog as of December 31, 2002, was \$32,972,000 compared to \$21,249,000 as of December 31, 2001. The increase between the years is the result of two new government contracts and the extension of an existing government contract.

## Results of Operations 2001 Compared with 2000

The Company reported net income of \$568,000 (\$0.05 per diluted share) on sales of \$19,937,000 for the year ended December 31, 2001, compared with a net income of \$591,000 (\$0.06 per diluted share) on sales of \$17,035,000 for the year ended December 31, 2000.

InfoSpherix revenue for 2001 was \$19,881,000 compared to \$16,885,000 in 2000. The \$2,996,000 (18%) increase was primarily a result of the growth of the reservation business and the government information services in addition to a wage determination settlement with the General Services Administration ("GSA"). Approximately \$1.7 million of the increase between years was a result of the new Michigan and Delaware reservation contracts and new business under the Maryland Information Center contract, net of the loss of the Federal Information Center contract, which concluded in October 2000, and a reduction in Commercial revenue between years. The decrease in commercial revenue between years is the result of a significant short-term pharmaceutical contract that benefited 2000 and two long-term contracts that concluded in the first quarter of 2001. In 2001, the Company received approximately \$1.3 million in revenue and recognized a related expense of \$2.1 million, in settlement of a U.S. Department of Labor Administrative Review Board ("ARB") decision concerning the Company's liability for wages and fringe benefits under two contracts that the Company was awarded by the GSA, a Federal Government agency. Under the settlement agreement, GSA reimbursed the Company \$1.3 million for wages and fringe benefits (other related costs are not reimbursable), and the Company agreed to pay retroactive wages and benefits to certain labor categories in accordance with the Service Contract Act. These funds were disbursed on April 18, 2001, to the affected employees.

See accompanying notes to financial statements.

13

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

	For the Year Ended December 31	
	2001	2000
Government	\$ 16,347	\$ 10,009
Commercial	3,534	6,876
	<u>\$ 19,881</u>	<u>\$ 16,885</u>

The Company's Federal Information Center ("FIC") contract, through the General Services Administration, concluded on October 13, 2000. In 2000, the FIC contract accounted for approximately \$2.7 million in revenue or 16% of total revenue for the period.

Commercial contracts are typically for shorter terms than government contracts and that can result in substantial variations in commercial revenues. For example, in the first quarter of 2000, the Company obtained and substantially performed a pharmaceutical contract, which accounted for approximately 15% of the Company's revenue in 2000.

BioSpherix revenue for 2001 was \$56,000 compared to \$150,000 in 2000. The \$94,000 (63%) decrease in revenue was as a result of a one-time sale in 2000 of a specialty carbohydrate manufactured by the Division. Sales of FlyCracker, the Firm's safe-for-humans and environmentally safe fly pesticide, were \$41,000 in 2001, compared to \$11,000 in 2000.

Interest income (expense) net in 2001 was \$114,000, compared to \$180,000 in 2000. The \$66,000 (37%) decrease was the result of the decline in interest rates during 2001.

The Company recognized no income tax expense in connection with its 2001 profits due to its tax loss carryforwards.

## Liquidity and Capital Resources

The Company renewed its Loan Agreement (the "Agreement") with Bank of America (the "Bank") on June 30, 2002, which provides for borrowing up to \$2 million, subject to advance rates as defined in the Agreement. Outstanding borrowings under the Agreement aggregated \$722,000 at December 31, 2002, and are collateralized by the Company's eligible accounts receivable. The interest rate under the Agreement is the Bank's prime rate. The total amount available for further advances to the Company was \$1,071,000 under the Agreement at December 31, 2002. The Agreement contains covenants that require the Company to meet certain tangible net worth ratios. The Company was in compliance with the bank covenants as of December 31, 2002. The line expires on June 30, 2003, but the Company anticipates that the line will be renewed in 2003. However, if the Company is unable to extend the line of credit, the Company believes that it has adequate funds to meet all of its current obligations for the balance of 2003.

Cash flow for the year ended December 31, 2002, reflects a net cash inflow of \$2,074,000 consisting of \$1,552,000 used in operating activities, \$1,019,000 used in investing activities, and \$4,645,000 provided by financing activities. Cash flow from operating activities in 2002 decreased \$3,980,000 from those of the prior year as a direct result of the decrease in InfoSpherix revenue and the increase in S,G&A and research and development expenditures. Investment in property and equipment decreased by \$165,000 as a result of the adequacy of our existing information and telecommunications systems to service the Company's current business demands. These investments were financed through the net proceeds from operations. The increase in cash provided by financing activities was primarily related to the exercise of warrants and options. In early 2002, an institutional stockholder exercised warrants which provided the Company \$3,705,000.

Working capital as of December 31, 2002, was \$8,788,000, which represents a \$1,649,000 increase from working capital of \$7,139,000 at December 31, 2001. The increase in working capital is principally due to cash provided by the exercise of warrants in 2002.

See accompanying notes to financial statements.

14

The Company's fixed cash requirements for leases, contracts, and debt in 2003 is approximately \$578,000.

The Company is anticipating sufficient cash flow from operating activities during 2003 to cover its continuing capital needs to start new contracts and maintain existing programs as well as a routine and consistent upgrading of its information and telecommunication systems. It plans to fund development of Naturlose from the approximately \$5 million cash allocated for that purpose. No dividends were paid in 2002 and none are anticipated in 2003.

In 2002, the Company repurchased 11,800 shares of its common stock in open market transactions for a total cost of \$63,000.

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."

### **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, 2002, the Company did not have any fixed-rate indebtedness and had approximately \$722,000 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 2002 variable rate debt and cash available for investment, a one percent change in interest rates would impact net interest income by less than \$79,000.

### **Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

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

#### **Index to Financial Statements**

[Report of Independent Certified Public Accountants](#)

[Statements of Operations for the years ended December 31, 2002, 2001, and 2000](#)

[Balance Sheets as of December 31, 2002 and 2001](#)

[Statements of Changes in Stockholders' Equity for the years ended December 31, 2002, 2001, and 2000](#)

[Statements of Cash Flows for the years ended December 31, 2002, 2001, and 2000](#)

[Notes to Financial Statements](#)

See accompanying notes to financial statements.

15

---

### **Report of Independent Certified Public Accountants**

#### **Board of Directors Spherix Incorporated**

We have audited the accompanying balance sheets of Spherix Incorporated (the "Company") as of December 31, 2002 and 2001, and the related statements of operations, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2002. 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 auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Spherix Incorporated as of December 31, 2002 and 2001, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2002, in conformity with accounting principles generally accepted in the United States of America.

/s/ Grant Thornton LLP

Vienna, Virginia  
February 10, 2003

See accompanying notes to financial statements.

16

---

**Spherix Incorporated**  
**Statements of Operations**  
For the years ended December 31, 2002, 2001, and 2000

	2002	2001	2000
<b>Revenue</b>	\$ 15,131,855	\$ 19,937,461	\$ 17,034,694
<b>Operating expense</b>			
Direct contract and operating costs	11,551,010	13,639,601	11,087,899
Selling, general and administrative expense	4,514,509	4,029,222	3,939,702
Research and development expense	475,997	390,156	281,084
Depreciation and amortization expense	1,593,380	1,424,714	1,314,962
Total operating expense	<u>18,134,896</u>	<u>19,483,693</u>	<u>16,623,647</u>
<b>(Loss) income from operations</b>	(3,003,041)	453,768	411,047
Interest income (expense), net	81,115	114,055	180,023
(Loss) income before taxes	(2,921,926)	567,823	591,070
Income tax expense	—	—	—
<b>Net (loss) income</b>	<u>\$ (2,921,926)</u>	<u>\$ 567,823</u>	<u>\$ 591,070</u>
Net (loss) income per share, basic	<u>\$ (0.26)</u>	<u>\$ 0.05</u>	<u>\$ 0.06</u>
Net (loss) income per share, diluted	<u>\$ (0.26)</u>	<u>\$ 0.05</u>	<u>\$ 0.06</u>
Weighted average shares outstanding, basic	<u>11,240,998</u>	<u>10,735,812</u>	<u>10,499,628</u>
Weighted average shares outstanding, diluted	<u>11,240,998</u>	<u>11,080,176</u>	<u>10,559,794</u>

See accompanying notes to financial statements.

17

**Spherix Incorporated**  
**Balance Sheets**  
As of December 31, 2002 and 2001

	2002	2001
<b>ASSETS</b>		
<b>Current assets</b>		
Cash and cash equivalents	\$ 8,656,069	\$ 6,582,203
Trade accounts receivable, net of allowance for doubtful accounts of \$71,000 and \$35,000	2,169,471	1,521,241
Other receivables	13,344	71,914
Prepaid expenses and other assets	749,227	675,979
Total current assets	<u>11,588,111</u>	<u>8,851,337</u>
Property and equipment, net of accumulated depreciation of \$5,252,858 and \$4,305,381	3,653,356	4,163,224
Patents, net of accumulated amortization of \$168,892 and \$139,968	211,673	226,367
Total assets	<u>\$ 15,453,140</u>	<u>\$ 13,240,928</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>Current liabilities</b>		
Bank line of credit	\$ 722,384	\$ 212,856
Accounts payable and accrued expenses	1,146,846	339,546
Accrued salaries and benefits	800,497	1,076,568
Notes payable	—	38,595
Capital lease obligations	27,220	44,576
Deferred revenue	103,662	—
Total current liabilities	<u>2,800,609</u>	<u>1,712,141</u>
Capital lease obligations	63,310	21,019
Deferred rent	112,887	122,155
Deferred compensation	214,876	194,493
Deferred revenue	1,000,000	1,000,000
Total liabilities	<u>4,191,682</u>	<u>3,049,808</u>
Commitments and contingencies	—	—
Redeemable common stock, 0 and 2,761,507 shares at December 31, 2002 and 2001, respectively	—	668,190

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; 1,412,545 and 10,790,170 issued, 11,351,057 and 10,737,568 outstanding, of which 0 and 2,761,507 shares are classified as redeemable common stock at December 31, 2002 and 2001, respectively	57,063	40,143
Paid-in capital in excess of par value	18,906,610	14,222,739
Treasury stock, 61,488 and 52,062 shares, at cost at December 31, 2002 and 2001, respectively	(390,434)	(350,097)
Accumulated deficit	(7,311,781)	(4,389,855)
Total stockholders' equity	11,261,458	9,522,930
Total liabilities and stockholders' equity	\$ 15,453,140	\$ 13,240,928

See accompanying notes to financial statements.

18

**Spherix Incorporated**  
**Statements of Changes in Stockholder's Equity**  
**For the years ended December 31, 2002, 2001 and 2000**

	Common Stock		Paid-in Capital in Excess of Par	Treasury Stock		Retained Earnings (Accumulated Deficit)	Stockholders' Equity
	Shares	Amount		Shares	Amount		
Balance, December 31, 1999	9,781,488	\$ 33,636	\$ 7,963,339	33,838	\$ (219,054)	\$ (5,542,815)	\$ 2,235,106
Issuance of common stock							
Sale of common stock in private placement	723,982	3,620	4,996,380	—	—	—	5,000,000
Exercise of employee stock options	178,475	892	4,996,380	—	—	—	844,925
Exercise of stock warrants	100,100	501	4,996,380	—	—	—	520,426
Cost of stock issuance	—	—	4,996,380	—	—	—	(44,167)
Acquisition of treasury stock in connection with option exercises	—	—	—	17,966	(132,499)	—	(132,499)
Issuance of treasury stock in payment of expense	—	—	—	(3,090)	23,577	(5,828)	17,749
Net reclassification for redeemable common stock	—	(110)	(131,761)	—	—	—	(131,871)
Net income	—	—	—	—	—	591,070	591,070
Balance, December 31, 2000	10,784,045	38,539	27,817,098	48,714	(327,976)	(4,957,573)	8,900,739
Issuance of common stock							
Exercise of employee stock options	6,125	30	43,296	—	—	—	43,326
Cost of stock issuance	—	—	(10,140)	—	—	—	(10,140)
Purchase of treasury stock	—	—	—	4,000	(22,975)	—	(22,975)
Issuance of treasury stock in payment of expense	—	—	—	(112)	854	(105)	749
Issuance of options	—	—	32,390	—	—	—	32,390
Net reclassification for redeemable common stock	—	1,574	9,444	—	—	—	11,018
Net income	—	—	—	—	—	567,823	567,823
Balance, December 31, 2001	10,790,170	40,143	27,892,088	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	\$ 32,575,959	61,488	\$ (390,434)	\$ (7,311,781)	\$ 11,261,458

See accompanying notes to financial statements.

19

**Spherix Incorporated**  
**Statements of Cash Flows**  
**For the years ended December 31, 2002, 2001 and 2000**

	2002	2001	2000
<b>Cash flows from operating activities</b>			
Net (loss) income	\$ (2,921,926)	\$ 567,823	\$ 591,070
Adjustments to reconcile net (loss) income to net cash (used in) provided by operating activities:			
Depreciation and amortization	1,593,380	1,424,714	1,314,961

Provision for uncollectible accounts receivable	36,000	(40,000)	(125,000)
Loss on disposal or write-down of assets	28,160	5,949	25,484
Treasury stock issued in payment of expenses	22,730	749	17,749
Stock-based compensation	20,700	—	—
<b>Changes in assets and liabilities:</b>			
Trade accounts receivable	(684,230)	640,506	(380,735)
Other receivables	58,570	148,941	(71,706)
Prepaid expenses and other assets	(73,248)	(224,997)	11,249
Accounts payable and accrued expenses	252,993	(35,629)	132,535
Deferred rent	20,383	33,010	45,329
Deferred compensation	(9,268)	18,237	136,308
Deferred revenue	103,662	(111,161)	—
<b>Net cash (used in) provided by operating activities</b>	<b>(1,552,094)</b>	<b>2,428,142</b>	<b>1,697,244</b>
<b>Cash flows from investing activities</b>			
Purchases of property and equipment	(1,005,151)	(1,170,322)	(1,887,828)
Additions to patent costs	(14,230)	(100,725)	(28,999)
<b>Net cash used in investing activities</b>	<b>(1,019,381)</b>	<b>(1,271,047)</b>	<b>(1,916,827)</b>
<b>Cash flows from financing activities</b>			
Net change on bank line of credit	509,528	(173,418)	(891,579)
Restricted cash under bank line of credit	—	500,000	—
Net change in book overdraft	272,922	(193,686)	(144,177)
Payments on notes payable	(38,595)	(194,664)	(607,457)
Payments on capital lease obligations	(47,348)	(73,201)	(213,303)
Proceeds from issuance of common stock	4,017,399	43,326	6,232,852
Purchase of treasury stock	(62,571)	(22,975)	—
Cost of issuance of common stock	(5,994)	(10,140)	(44,167)
<b>Net cash provided by (used in) financing activities</b>	<b>4,645,341</b>	<b>(124,758)</b>	<b>4,332,169</b>
<b>Net increase in cash and cash equivalents</b>	<b>2,073,866</b>	<b>1,032,337</b>	<b>4,112,586</b>
<b>Cash and cash equivalents, beginning of year</b>	<b>6,582,203</b>	<b>5,549,866</b>	<b>1,437,280</b>
<b>Cash and cash equivalents, end of year</b>	<b>\$ 8,656,069</b>	<b>\$ 6,582,203</b>	<b>\$ 5,549,866</b>
<b>Supplemental cash flow information</b>			
Income taxes refunded	\$ —	\$ —	\$ 151,312
Interest paid	\$ 33,997	\$ 83,160	\$ 143,903
Property and equipment financed by capital leases	\$ 72,283	\$ 13,644	\$ —
Property and equipment financed by accounts payable	\$ 5,314	\$ —	\$ 72,245

See accompanying notes to 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 two facilities in Maryland. The Company consists of a biotechnology division (“BioSpherix”) and an information services division (“InfoSpherix”). InfoSpherix consists of Commercial Information Services (“CIS”), Government Information Services (“GIS”) and Information Technology Services (“ITS”). BioSpherix is dedicated to research, development, and productization of proprietary products. The CIS and GIS operate information center services providing consulting, information management, and materials management to the public as well as reservation and tourism solutions. ITS provides software engineering, telecommunications, network infrastructure, internet provision, and other computer system services via the CIS and GIS.

**Cash Equivalents**

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. At December 31, 2002, the Company had approximately \$8.6 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, 2002, three major contracts constituted 66% of the trade accounts receivable, the components of which were 41%, 13%, and 12%. No other single contract was greater than 10% of total trade accounts receivable. Receivables from Federal and state agencies represented 77% 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. 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 is approximately \$204,000 of FlyCracker inventory valued at lower of cost or market.

### ***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 8. Pursuant to the contractual terms, the advance will be recovered and therefore recognized as revenue at the rate of 50% of such future royalties. Commercialization of the products subject to the royalties is expected in 2003; however, since the Company is unable to accurately estimate the amount of revenue that will be recognized from the royalties in 2003, the deferred revenue has been classified as noncurrent.

### ***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 when necessary 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 \$20,700 of compensation expense incurred in 2002 as a result of issuing certain option grants at below market and \$32,000 of compensation expense incurred in 2001 as a result of extending the life of certain option grants. 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 tables summarize the assumptions used and the pro-forma net (loss) income and net (loss) income per share resulting from applying SFAS 123.

		2002	2001	2000
Net (loss) income, as reported		\$ (2,921,926)	\$ 567,823	\$ 591,070
Add: stock-based employee compensation expense included in reported net (loss) income		20,700	32,000	—
Deduct: total stock-based employee compensation expense determined under fair-value based method for all awards, net of tax effects		(868,867)	(420,668)	(225,148)
Pro forma net (loss) income		\$ (3,770,093)	\$ 179,155	\$ 365,922
Net (loss) income per share – basic	As reported	\$ (0.26)	\$ 0.05	\$ 0.06
	Pro forma	\$ (0.34)	\$ 0.01	\$ 0.04
Net (loss) income per share – diluted	As reported	\$ (0.26)	\$ 0.05	\$ 0.06
	Pro forma	\$ (0.34)	\$ 0.01	\$ 0.04

### Net Income Per Share

Basic net (loss) income per common share has been computed by dividing net (loss) income by the weighted-average number of common shares outstanding during the year. Diluted net income per common share has been computed by dividing net income by the weighted-average number of common shares outstanding with an assumed increase in common shares outstanding for common stock equivalents, which includes outstanding options and warrants. Diluted net loss per common share in 2002 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 38,468 at December 31, 2002.

	2002	2001	2000
Weighted average shares outstanding, basic	11,240,998	10,735,812	10,499,628
Weighted average dilutive common stock equivalents	—	344,364	60,166
Weighted average shares outstanding, diluted	11,240,998	11,080,176	10,559,794

## 2. 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, 1999	\$ 200,000
Write-off of uncollectible accounts	(156,000)
Valuation adjustment	31,000
Balance, December 31, 2000	75,000
Write-off of uncollectible accounts	(1,236)
Valuation adjustment	(38,764)
Balance, December 31, 2001	35,000
Valuation adjustment	36,000
Balance, December 31, 2002	\$ 71,000

## 3. Property and Equipment

The components of property and equipment as of December 31, 2002, at cost are:

	2002	2001
Computer software	\$ 3,071,244	\$ 2,795,267
Computer hardware	4,435,526	4,441,411
Office furniture and equipment	441,325	416,260
Leasehold improvements	512,002	306,805
Capital leases	446,117	508,862
Total cost	8,906,214	8,468,605
Accumulated depreciation and amortization (including capital lease accumulated depreciation of \$392,337 and \$264,346)	(5,252,858)	(4,305,381)
Property and equipment, net	\$ 3,653,356	\$ 4,163,224

## 4. Debt

### Line of Credit



The Company renewed its Loan Agreement (the "Agreement") with Bank of America (the "Bank") on June 30, 2002, which provides for borrowing up to \$2 million, subject to advance rates as defined in the Agreement. Outstanding borrowings under the Agreement aggregated \$722,000 at December 31, 2002, and are collateralized by the Company's eligible accounts receivable. The interest rate under the Agreement is the Bank's prime rate. The total amount available for further advance to the Company was \$1,071,000 under the Agreement at December 31, 2002. The Agreement contains covenants that require the Company to meet certain tangible net worth ratios. The Company was in compliance with the bank covenants as of December 31, 2002. The line expires on June 30, 2003, but the Company anticipates that the line will be renewed in 2003. However, if the Company is unable to extend the line of credit, the Company believes that it has adequate funds to meet all of its current obligations for the balance of 2003.

## 5. Accounts Payable and Accrued Expenses

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

	2002	2001
Accrued expenses	\$ 547,000	\$ 129,000
Book overdraft	326,000	55,000
Accounts payable	274,000	156,000
	<u>\$ 1,147,000</u>	<u>\$ 340,000</u>

The increase in accrued expense between years is related to legal fees in connection with the Arla Foods arbitration.

## 6. Stockholder Equity

### Private Placements

On March 20, 2002, Warrants for 250,000 shares of Common Stock at \$6.50 per share and Warrants for 325,00 shares of Common Stock at \$6.40 per share were exercised by an institutional investor. Warrants for the purchase of 1,085,973 shares at \$6.91 are outstanding at December 31, 2002.

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 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 2002, 2001, and 2000, 422,800, 375,100, and 44,400 options were granted under the Plan, respectively. At December 31, 2002, 68,750 options were available for grant under the Plan. An additional 6,000, 5,000, and 5,000 options were granted outside the Plan in 2002, 2001, and 2000, respectively. Activity for the three years ended December 31, 2002, for all option grants is shown below:

	2002 Shares	2002 Weighted Average Exercise Price	2001 Shares	2001 Weighted Average Exercise Price	2000 Shares	2000 Weighted Average Exercise Price
Outstanding at beginning of year	654,575	\$ 7.18	290,500	\$ 6.55	634,100	\$ 5.47
Granted	428,800	\$ 7.77	380,100	\$ 7.64	49,400	\$ 6.53
Exercised	(47,375)	\$ 6.57	(6,125)	\$ 6.12	(178,475)	\$ 4.73
Expired or forfeited	(124,525)	\$ 6.98	(9,900)	\$ 7.09	(214,525)	\$ 4.97
Outstanding at end of year	<u>911,475</u>	\$ 7.52	<u>654,575</u>	\$ 7.18	<u>290,500</u>	\$ 6.55
Exercisable at end of year	165,700		228,627		203,138	
Price range of options						
Outstanding	\$2.25-\$10.51		\$4.06-\$10.51		\$4.06-\$7.25	
Exercised	\$5.78-\$7.13		\$5.78-\$6.44		\$3.31-\$7.25	
Expired or forfeited	\$4.06-\$9.55		\$6.00-\$7.25		\$4.68-\$7.12	

The following table summarizes information with respect to stock options outstanding at December 31, 2002:

Range of Exercise Price	Number of Options Outstanding at 12/31/02	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price
\$2.25-\$5.78	83,475	3.2	\$ 4.48
\$6.00-\$7.84	359,700	5.6	\$ 6.43
\$8.09-\$10.51	468,300	9.3	\$ 8.89
	<u>911,475</u>	7.3	\$ 7.52

The following table summarizes information with respect to stock options exercisable at December 31, 2002:

Year of Option Expiration	Number of Options	Weighted Average Exercise Price	Price Range
2003	56,475	\$ 6.07	\$5.78-\$6.36
2004	11,488	\$ 6.12	\$6.00-\$6.60

2005	23,602	\$	6.53	\$6.44-\$7.08
2006	18,135	\$	9.64	\$9.55-\$10.51
2007	56,000	\$	6.42	\$6.31-\$7.35
<b>All Years</b>	<b>165,700</b>	<b>\$</b>	<b>6.65</b>	<b>\$5.78-\$10.51</b>

25

The Company used the following values for the Black-Scholes calculation used to measure the fair value of stock-based compensation in accordance with SFA5123.

Expected life (years)	4-6	4-6	4
Risk-free interest rate	4.25%	4.75%	5.75%
Volatility	73.1%	80.0%	73%
Dividend yield	0%	0.0%	0.0%
Weighted average remaining contractual life (years)	7.3	5.7	2.4
Weighted average fair value at date of grant	\$ 5.05	\$ 4.94	\$ 3.76

### Treasury Stock Transactions

During 2002, the Company issued 2,914 shares of Common Stock previously held in the treasury in payment of expenses. The excess of the value of the stock on the date of issuance over the purchase price of the treasury stock has been charged to paid-in capital in the amount of \$495. During 2002, the Company also purchased 11,800 shares of Common Stock at a total cost of \$62,571.

During 2001, the Company issued 112 shares of Common Stock previously held in the treasury in payment of expenses. The excess of the purchase price of the treasury stock over the value of the stock on the date of issuance has been charged to retained earnings in the amount of \$105. During 2001, the Company also acquired 4,000 shares of Common Stock, which were recorded as an addition to treasury stock.

## 7. Income Taxes

There were no tax expenses for the years 2002, 2001, and 2000 as a result of net losses in 2002 and the net operating loss carryforwards.

The tax effect of significant temporary differences representing deferred tax assets as of December 31, 2002 and 2001, is as follows:

	2002		2001	
	Current	Non-Current	Current	Non-Current
Property and equipment	\$ —	\$ (636,863)	\$ —	\$ (633,429)
Deferred rent	—	55,951	—	22,583
Accrued vacation	36,882	—	29,202	—
Allowance for doubtful accounts	27,420	—	13,517	—
Deferred revenue	—	386,200	—	386,200
Net operating loss carryforward	—	4,011,838	—	2,894,303
Accrued bonus	—	—	—	—
Other	(17,492)	43,597	11,953	47,176
	46,810	3,860,723	54,672	2,716,833
Valuation allowance	(46,810)	(3,860,723)	(54,672)	(2,716,833)
Deferred tax asset	\$ —	\$ —	\$ —	\$ —

Approximately \$2.9 million in U.S. net operating losses was created in 2002. The Company has \$10.4 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 2002 and its accumulated deficit, the Company has provided a full valuation allowance against the net deferred tax asset. During fiscal year 2002, the Company increased the allowance in the amount of \$1.14 million to fully reserve the net deferred tax asset at December 31, 2002. At December 31, 2002, approximately \$342,000 of the valuation allowance, related to benefits from stock compensation, will be credited to "paid in capital" when recognized in future periods.

26

Reconciliation between actual tax expense and tax computed at the statutory Federal rate of 34 percent for 2002, 2001, and 2000 are as follows:

	2002	2001	2000
U.S. Federal income tax rate at 34%	\$ (993,455)	\$ 193,060	\$ 200,964
State taxes, net of federal tax benefit	(134,993)	26,233	27,307
Change in valuation allowance	1,136,030	(235,301)	64,620
Expenses not deductible for tax purposes	31,750	28,674	6,353
Valuation allowance related to stock compensation	(34,006)	(8,639)	(299,244)
Adjustment for prior year taxes	(5,326)	(4,027)	—
Income tax provision (benefit)	\$ —	\$ —	\$ —

## 8. Commitments and Contingencies

## Government Contracts

The principal portion of the Company's revenue has been generated by the InfoSpherix Division. Several of the Company's contracts that provide these revenues (principally contracts with the U.S. Government) are from time to time subject to protest proceedings. These contracts are awarded pursuant to a competitive bidding process. As of December 31, 2002, none of the Company's contracts were under protest; however, the Company is contesting the cancellation of the NPS Reservation System procurement and the non-competitive bundling of this program with the National Forest Service's National Recreation and Reservation System contract. In 2002, the NPS contract accounted for approximately \$4.1 million in revenue or 27% of the total revenue for the year.

## Leases

The Company has various commitments under capital and operating leases through 2009 relating to computer hardware and software, office equipment, its call center facility in Cumberland, Maryland, and its call center and administrative offices in Beltsville, Maryland.

Future minimum rentals as of December 31, 2002, under noncancellable leases are as follows:

<u>Year Ending December 31,</u>	<u>Capital Leases</u>	<u>Operating Leases</u>
2003	\$ 47,449	\$ 530,638
2004	32,121	546,124
2005	30,028	562,507
2006	27,059	579,383
2007	16,537	596,764
Thereafter	—	717,611
	<u>153,194</u>	<u>\$ 3,533,027</u>
Less: executory costs	50,311	
Less: amount representing interest	12,353	
Capital lease obligations	<u>90,530</u>	
Less current portion	27,220	
Long-term obligations	<u>\$ 63,310</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 \$645,000 in 2002, \$652,000 in 2001, and \$707,000 in 2000 under operating leases.

## Related Party Transactions

### Stock Redemption Agreements

In August 1978, the Company, with stockholders' approval, entered into agreements, which were restated on January 15, 1996, with two officer-stockholders (the "Principal Stockholders") who beneficially own over 24% of the outstanding common stock at December 31, 2002. Believing that the Spherix stock is now sufficiently liquid to eliminate the need for their Stock Redemption Agreements that were funded by the Company, Dr. and Mrs. Levin voluntarily surrendered their stock redemption rights, and allowed the Company to stop insuring their lives thereby saving the annual premiums. Under the agreement, upon their deaths, the Company may have been required to redeem from their estates the number of shares of the Company's stock necessary to pay estate taxes and administrative expenses of the estate, if any, up to \$5,000,000. Shares would be redeemed at the then-current market price. Redeemable common stock, as of December 31, 2002 and 2001, consisted of 0 and 2,761,507 shares, respectively. The Company was the beneficiary of an insurance policy on the lives of these individuals, which the Company maintained to provide benefits of \$5,000,000 for this agreement. As a result of the termination of the Stock Redemption Agreement, the insurance policy was not renewed at the end of the year.

### Employment, Deferred Compensation, Stock Redemption and Consulting Agreements for Principal Stockholders

Dr. Gilbert V. Levin, Company founder and CEO, has served under an Employment Agreement since March 3, 1969. This Agreement was amended and restated in 2002, ensuring his continued full-time employment 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 is unfunded. At December 31, 2002, the Company had no liability under the plan as actuarially determined. The SERPs for Dr. and Mrs. Levin at present have zero value. The Company also agreed to fund long-term lifetime healthcare and health insurance policies for them. At December 31, 2002, the Company's liability was estimated to be \$113,000. Upon completion of their employment, the officer-stockholders also agree to serve as consultants to the Company on a minimum part-time, plus as-needed basis, at a specified daily rate.

### Employee Contract

The Company has entered into an employment agreement with its Founder, Chair, CEO, and Treasurer, 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 expires December 31, 2004.

## Deferred Rent

The Company entered into a lease for its headquarters and research facilities in 1997. 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 lease.

### Deferred Revenue

On September 27, 1996, the Company signed an exclusive worldwide licensing agreement with MD Foods Ingredients ambap (MDFI) of Denmark 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

28

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 represents a non-refundable advance against future royalties, recoverable and to be recognized as revenue, at the rate of 50% of such annual royalties. The term of the Agreement is five years after the expiration of the last to expire present or future U.S. patent covering the licensed product and/or the licensed process. The Company has two U.S. patents covering the proprietary method for the manufacture of tagatose, which expire on July 19, 2009, and March 25, 2011, respectively. Additional patents have been procured and others are likely to result from ongoing research. The Company believes the new patents will extend the term of the royalties. Full running royalties will be paid to the Company on sales, which the Company believes will begin when the first full-scale production plant for tagatose becomes operational in 2003. In 2000, MDFI was merged into Arla Foods.

### Other

On May 23, 2002, the Company filed for arbitration against its licensee, MD Foods ambap (merged into Arla Foods ambap). The filing sought damages for what the Company claims has been an unreasonably long time for its licensee to bring tagatose to market and seeks to determine whether Arla has abrogated its license as a result. The Company has also sought a determination of its right to terminate the license agreement. Arla has asked the arbitral tribunal to order the Company to pay Arla's attorney fees, expert fees and the costs of the arbitration, and has reserved the right to file a counter-claim against the Company. The Company also seeks other measures to accelerate the pace toward commercialization of uses of the new sweetener licensed to the Danish firm. In the event Arla is found to have abrogated its license agreement with Spherix, the Company will develop alternate sources of supply of tagatose for uses in food products. To date the Company has incurred approximately \$473,000 in related legal expenses and the Company expects to incur significant legal expenses in 2003.

In December 2002, the National Park Service ("NPS") cancelled the procurement for the National Park Reservation System. The Company had operated this program for the past five years. NPS informed the Company that the U.S. Office of Management and Budget had ordered NPS to non-competitively bundle this program with the National Forest Service's National Recreation and Reservation System contract. The Company is contesting this action.

The Company is also a party to legal actions arising in the ordinary course of business. Management of the Company, after reviewing developments to date with legal counsel, is of the opinion that the outcome of such matters will not have a materially adverse effect on the financial position or results of operations of the Company.

## 9. 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 1 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 \$97,000, \$85,000, and \$72,000 in 2002, 2001, and 2000, respectively.

## 10. 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.

Financial information by business segment for the years ended December 31, 2002, 2001, and 2000 is summarized below:

29

		Year Ended December 31,		
		2002	2001	2000
		(Dollars in thousands)		
<b>Revenues</b>	InfoSpherix	\$ 15,043	\$ 19,881	\$ 16,885
	BioSpherix	89	56	150
	<b>Total revenues</b>	<b>\$ 15,132</b>	<b>\$ 19,937</b>	<b>\$ 17,035</b>
<b>Operating (Loss) Profit and (Loss) Income Before Income Taxes</b>	InfoSpherix	\$ (1,239)	\$ 1,110	\$ 870
	BioSpherix	(1,764)	(656)	(459)
	<b>Total operating income (loss)</b>	<b>(3,003)</b>	<b>454</b>	<b>411</b>
	Interest income (expense), net	81	114	180
	<b>Income (loss) from operations before income taxes</b>	<b>\$ (2,922)</b>	<b>\$ 568</b>	<b>\$ 591</b>

<b>Identifiable Assets</b>	InfoSpherix	\$ 5,195	\$ 5,314	\$ 6,557
	BioSpherix	384	216	164
	General corporate assets	9,874	7,711	6,730
	Total assets	<u>\$ 15,453</u>	<u>\$ 13,241</u>	<u>\$ 13,451</u>
<b>Capital Expenditures</b>	InfoSpherix	\$ 770	\$ 919	\$ 1,882
	BioSpherix	14	8	—
	General corporate assets	299	185	21
	Total capital expenditures	<u>\$ 1,083</u>	<u>\$ 1,112</u>	<u>\$ 1,903</u>
<b>Depreciation and Amortization</b>	InfoSpherix	\$ 1,390	\$ 1,278	\$ 1,186
	BioSpherix	25	21	20
	General corporate assets	178	125	109
	Total depreciation and amortization	<u>\$ 1,593</u>	<u>\$ 1,424</u>	<u>\$ 1,315</u>

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. During 2001, InfoSpherix recognized revenue from three of its customers, all of which were government agencies, representing 22%, 18%, and 14% of the total Company revenues. During 2000, InfoSpherix recognized revenue from four of its customers, including two government agencies, representing 22%, 16%, 15%, and 12% of the total Company revenues. Government contracts accounted for 94% and 82% of the InfoSpherix revenue in 2002 and 2001, 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) a/b of Denmark for the use, manufacture and sale of Spherix's low-calorie sugar, tagatose, as a sweetener (see Note 8 "Commitments and Contingencies"). In 2000, MDFI was merged into Arla Foods.

BioSpherix also obtained and filed for patents on other inventions, including a safe-for-humans (and animals) pesticide against house and stable flies, FlyCracker, which was market tested in 2000. While continuing its sales efforts, the Company is considering whether it would be more profitable to license the right to sell FlyCracker. It potentially fills an important need expressed by the EPA for safe pesticides to replace the harsh chemicals that the EPA cites as toxic. BioSpherix is also developing other proprietary products.

Operating (loss) profit consists of revenue less operating expenses. In computing operating profit, interest expense and income taxes were not considered. Operating loss for InfoSpherix was \$1,239,000 (8% of InfoSpherix revenue) for 2002.

30

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.

#### 11. 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,
<u>2001</u>				
Revenue	\$ 5,218	\$ 4,840	\$ 6,795	\$ 3,084
Gross profit	\$ 1,243	\$ 1,711	\$ 2,982	\$ 361
Net (loss) income	\$ (157)	\$ 289	\$ 1,437	\$ (1,001)
Net (loss) income per share, basic	\$ (0.01)	\$ 0.03	\$ 0.13	\$ (0.09)
Net (loss) income per share, diluted	\$ (0.01)	\$ 0.03	\$ 0.13	\$ (0.09)
<u>2002</u>				
Revenue	\$ 3,066	\$ 4,227	\$ 4,832	\$ 3,007
Gross profit	\$ 429	\$ 1,231	\$ 1,688	\$ 233
Net (loss) income	\$ (1,111)	\$ (299)	\$ 137	\$ (1,649)
Net (loss) income per share, basic	\$ (0.10)	\$ (0.03)	\$ 0.01	\$ (0.15)
Net (loss) income per share, diluted	\$ (0.10)	\$ (0.03)	\$ 0.01	\$ (0.15)

#### Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

31

### PART III

#### Items 10 through 13.

Information required by Part III (Items 10 through 13) 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, 2002, 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.

## Item 14. CONTROLS AND PROCEDURES

Within the 90 days prior to the date of this report, the Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures 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.

## 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) Supplemental Executive Retirement Plan Agreement dated as of February 17, 1993, by and between Gilbert V. Levin and the Company (incorporated by reference to Form 10-KSB filed March 31, 1993)
- (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
- (10.3) Consulting Agreement dated as of February 17, 1993, by and between Gilbert V. Levin and the Company (incorporated by reference to Form 10-KSB filed March 31, 1993)
- (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 May 15, 2002, by and between Gilbert V. Levin and the Company
- (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)
- (23) Consent of Grant Thornton LLP
- (99.1) Certification of Chief Executive Officer of Spherix Incorporated pursuant to 18 U.S.C. Section 1350
- (99.2) Certification of Chief Financial Officer of Spherix Incorporated pursuant to 18 U.S.C. Section 1350

32

## 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: February 20, 2003

By: /s/ Gilbert V. Levin  
Gilbert V. Levin  
Chair, CEO, & Treasurer

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

<u>/s/ Gilbert V. Levin</u> Gilbert V. Levin	Chair, CEO, and Treasurer	February 20, 2003
<u>/s/ David H. Affeldt</u> David H. Affeldt	Director, President, and Chief Operating Officer	February 20, 2003
<u>/s/ M. Karen Levin</u> M. Karen Levin	Director, Vice President for Communications	February 20, 2003
<u>/s/ Lionel V. Baldwin</u> Lionel V. Baldwin	Director	February 20, 2003
<u>/s/ Thomas Gantt</u> Thomas Gantt	Director	February 20, 2003

/s/ Anne S. MacLeod  
Anne S. MacLeod

/s/ Thomas G. Moore  
Thomas G. Moore

/s/ Carol Y. Sanchez  
Carol Y. Sanchez

/s/ Deborah S. Streb  
Deborah S. Streb

Director

Director

Director

Director

February 20, 2003

February 20, 2003

February 20, 2003

February 20, 2003

---

**Certifications**

I, Gilbert V. Levin, Chair, Chief Executive Officer, and Treasurer, 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-14 and 15d-14) for the registrant and we have:
  - a) designed such disclosure controls and procedures 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 as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

/s/ Gilbert V. Levin  
Gilbert V. Levin  
Chair, CEO and Treasurer  
February 20, 2003

---

I, Richard C. Levin, Chief Financial Officer and VP, Administration, 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-14 and 15d-14) for the registrant and we have:
  - a) designed such disclosure controls and procedures 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 as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.





**Spherix Incorporated**

---

**AMENDED AND RESTATED  
SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN AGREEMENT**

This AMENDED AND RESTATED SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN AGREEMENT (this "Agreement"), made and entered into this 15<sup>th</sup> day of May, 2002, between SPHERIX INCORPORATED, a corporation organized under the laws of the state of Delaware (hereinafter referred to as the "Corporation"), and M. Karen Levin (hereinafter referred to as the "Employee").

Witnesseth

WHEREAS, the Corporation is engaged in research, development, products and services in the areas of chemistry, biology, microbiology, occupational health, air and water pollution control, toxicology, wastewater treatment, environmental and medical products, writing, editing, word processing, graphics arts, and information services; and

WHEREAS, the Employee has been engaged as an expert and corporate executive in major enterprises in the areas indicated above; and

WHEREAS, the Employee is presently Vice President, Communications; and

WHEREAS, during the period of the Employee's employment, the Corporation has greatly enhanced its activities and prestige largely as a result of the activities by the Employee on behalf of the Corporation:

NOW, THEREFORE, in consideration of the mutual promises and covenants herein set forth and other good and valuable consideration, the receipt of which is hereby acknowledged, the Corporation and the Employee do hereby agree, each with the other as follows:

1. Employment. The Employee hereby agrees to remain in the full-time or part-time employ, as determined by the Board, of the Corporation, until her retirement, death, or disability, or such other time as the Employee and the Corporation agree. Until the occurrence of one of the events set forth above, the employee shall continue to devote her full—time or part-time, as determined by the Board, attention exclusively to the business of the Corporation. As used herein, the term "retirement" shall mean the time at which the Employee ceases to provide services to the Corporation.

2. Compensation.

(a) As compensation for rendering full-time or part-time attention to-the business of the Corporation until the occurrence of an event specified in Section 1 of this Agreement, the Corporation hereby agrees to

1

---

pay the Employee compensation at the rate of compensation now being paid her or at such other higher rate as may, from time to time, be agreed upon. Any increase in the rate or change in the method of compensation shall in no way be deemed a violation or waiver of any of the provisions of this Agreement.

(b) As a Supplemental Executive Retirement Plan (SERP) payment for services currently being rendered, and in order to assure the Employee of adequate retirement income, the Corporation hereby agrees to pay the Employee a monthly SERP payment according to the following formula:

Sixty percent (60%) of average total compensation, defined as base salary plus annual bonus, for the highest three (3) years of full-time employment prior to retirement, divided by twelve (12), less the sum of the following three (3) items calculated on a monthly basis: i) fifty percent (50%) of the Social Security payment received by the Employee; ii) the monthly amount the Employee would receive if the 401(k) plan lump sum payment attributable to company contributions received by the Employee upon her retirement, including the value of any loans or withdrawals, mandatory or voluntary, taken by the Employee prior to her retirement (which value shall be computed using as the relevant interest rate, the national average prime rate applied to the loan or distribution from date of receipt), were used to acquire an annuity which would pay equal monthly payments commencing on the date of retirement and continuing throughout the actuarially determined balance of the Employee's lifetime (which amount shall be computed using as the relevant interest rate, the average prime rate as published by the Wall Street Journal or other national daily business publication for the thirty (30) day period immediately preceding retirement); and iii) the monthly amount the Employee would receive if the lump sum payment received by the Employee from the Corporation's defined benefit pension plan (which value shall be computed using as the relevant interest rate, the national average prime rate applied to the lump sum payment from date of receipt) were used to acquire an annuity which would pay equal monthly payments commencing on the date of retirement and continuing throughout the actuarially determined balance of the Employee's lifetime (which amount shall be computed using as the relevant interest rate, the average prime rate as published by the Wall Street Journal or other national daily business publication for the thirty (30) day period immediately preceding retirement).

Payment of the SERP shall commence with the first month following the Employee's retirement from the Corporation, and shall be paid monthly for the remainder of the Employee's lifetime. In the event the Employee retires from the Corporation due to a disability, the SERP payment will be calculated according to the following formula:

2

---

Sixty percent (60%) of average total compensation, defined as base salary plus annual bonus, for the highest three (3) years of full-time employment prior to retirement, divided by twelve (12), less the sum of the following four (4) items calculated on a monthly basis: i) fifty percent (50%) of the Social Security payment received by the Employee; ii) the monthly amount the Employee would receive if the 401(k) plan lump sum payment attributable to company contributions received by the Employee upon her retirement, including the value of any loans or withdrawals, mandatory or

voluntary, taken by the Employee prior to her retirement (which value shall be computed using as the relevant interest rate, the national average prime rate applied to the loan or distribution from date of receipt), were used to acquire an annuity which would pay equal monthly payments commencing on the date of retirement and continuing throughout the actuarially determined balance of the Employee's lifetime (which amount shall be computed using as the relevant interest rate, the average prime rate as published by the Wall Street Journal or other national daily business publication for the thirty (30) day period immediately preceding retirement); iii) the monthly amount the Employee would receive if the lump sum payment received by the Employee from the Corporation's defined benefit pension plan (which value shall be computed using as the relevant interest rate, the national average prime rate applied to the lump sum payment from date of receipt) were used to acquire an annuity which would pay equal monthly payments commencing on the date of retirement and continuing throughout the actuarially determined balance of the Employee's lifetime (which amount shall be computed using as the relevant interest rate, the average prime rate as published by the Wall Street Journal or other national daily business publication for the thirty (30) day period immediately preceding retirement); and iv) payment from any company-provided short or long term disability plan in effect for employees of the Corporation.

In the event disability payments cease because of terms of the insurance contract specifying duration of benefits, the SERP payment will be recalculated without the offset of item (iv).

(c) The SERP payment provided for in Section 2(b) shall be adjusted in the second and subsequent years of payment so that payments are increased or decreased to reflect the net change in the Consumer Price Index ("CPI") for the Washington DC Metropolitan area as prepared by the United States Department of Labor, Bureau of Labor Statistics, when compared with the first year in which payments are made. In the event that there is no Consumer Price Index for the Washington DC Metropolitan area, the Consumer Price Index for the nearest metropolitan area for which there is such an index shall be used as the basis for adjusting the SERP payment. If no metropolitan area Consumer

3

---

Price Index exists, the national Consumer Price Index for the United States shall be used as the basis for adjusting the SERP payment. The amount of the adjustment shall equal one hundred percent (100%) of the change in the CPI up to and including ten percent (10%) plus seventy-five percent (75%) of any change in the CPI in excess of ten percent (10%). In making such adjustments, the calendar year in which the first payment is made under Section 2(b) shall be treated as the base year, and all adjustments made shall proportionately reflect subsequent changes in the CPI as compared with that base year. All adjustments under this Section 2(c) shall be made commencing with each anniversary date of the first payment made under Section 2(b). Following the adjustment of the payment amount on such an anniversary date, payment shall continue to be made at that adjusted rate until the next such anniversary date, at which time payment shall again be adjusted to reflect the provisions of this section.

(d) The Board of Directors, at its discretion, may increase the adjustment above the level of the CPI change, but shall not provide an adjustment less than the CPI change.

(e) All SERP payments shall be subject to any deductions the Corporation is required to make under applicable State or Federal law.

(f) This Agreement shall not preclude, in addition to current compensation or SERP payments as specified herein, the payment to the Employee of such other or additional amounts as may be payable or distributable during the term of employment or thereafter, or restrict in any way any benefits payable under any employee benefit plan of the Corporation now in effect or hereafter adopted. Neither shall any payment under this Agreement be deemed to constitute payment in lieu of or in reduction of any compensation or any benefit under such plans.

3. Merger or Consolidation. Notwithstanding any provisions in this Agreement to the contrary, in the event of a merger, consolidation, or reorganization of the Corporation (whether the Corporation is the continuing or disappearing entity), the Corporation shall advise the successor organization of the terms of this Agreement. In any event, however, this Agreement shall be binding upon the organization that is the successor to the Corporation and the Corporation shall remain liable subsequent to the consolidation or merger in the same manner as immediately prior thereto. In the event of any merger or consolidation of the Corporation or other similar transaction to which the Employee does not assent as a Director or stockholder due to the Employee's good faith determination that such transaction is likely to materially and adversely affect the financial ability of the surviving entity to perform this

4

---

Agreement, the Employee shall have the election to accelerate all future payments then due and to receive the commuted actuarial value of those remaining future payments at the time of such transfer.

#### 4.1 Non-Competition.

(a) During a period of three (3) years following retirement, the Employee will not, directly or indirectly, either individually or as owner, partner, agent, employee, consultant or otherwise, engage in any activity competitive with the business of the Corporation or its affiliates, nor will she, in competition with the Corporation or its affiliates, solicit or otherwise attempt to establish for herself or any other person, firm or entity, any business relationships with any person, firm or corporation which was, at any time during the employment period of the Employee with the Corporation, a customer of the Corporation or one of its affiliates. Any violations of this provision shall be grounds for termination by the Corporation of this Supplemental Executive Retirement Plan Agreement.

(b) Nothing in this paragraph 4.1 shall be construed to prevent the Employee from owning, as an investment, not more than 1% of a class of equity securities issued by any competitor of the Corporation or its affiliates and publicly traded and registered under Section 12 of the Securities Exchange Act of 1934.

4.2 Trade Secrets. The Employee will keep confidential any trade secrets or confidential or proprietary information of the Corporation and its affiliates which are now known to her or which hereafter may become known to her as a result of her employment or association with the Corporation and shall not at any time directly or indirectly disclose any such information to any person, firm or corporation, or use the same in any way other than in connection with the business of the Corporation or its affiliates at all times during retirement. For purposes of this Agreement, "trade secrets or confidential or proprietary information" means information unique to the Corporation or any of its affiliates which has a significant business purpose and is not known or

generally available from sources outside the Corporation or any of its affiliates or typical of industry practice. Any violations of this provision shall be grounds for termination by the Corporation of this Supplemental Executive Retirement Plan Agreement.

5. Corporation's Remedies for Breach. It is recognized that damages in the event of breach of paragraphs 4.1 or 4.2 by the Employee would be difficult, if not impossible, to ascertain, and it is therefore agreed that the Corporation, in addition to and without limiting any other remedy or right they may have, shall terminate SERP payments as provided under this Agreement in the event of breach of paragraphs 4.1 or 4.2. Prior to the termination of SERP payments, however, the Corporation shall provide summary notice to the Employee of such action, by registered or certified mail, return receipt requested, addressed to the Employee at her then principal residence

5

---

according to the records of the Corporation. The Employee shall have thirty (30) days from date of receipt of this summary notice to respond in writing to the Corporation at its then principal offices. SERP payments shall be terminated if Employee response is not timely, or if Employee response does not negate allegations of non-competition and/or confidentiality violations. In addition, the Corporation shall have the right to seek an injunction or other equitable relief in any court of competent jurisdiction, enjoining any such breach, and the Employee hereby waives any and all defenses she may have on the ground of lack of jurisdiction or competence of the court to grant such an injunction or other equitable relief. The existence of this right shall not preclude any other rights and remedies at law or in equity which the Corporation may have.

6. Non-Alienation. This Agreement is personal to the Employee and may not be assigned by her; further, this Agreement may not be assigned by the Corporation except in connection with the assignment/transfer of substantially all of its assets. With respect to SERP payments provided in Section 2 (b) of this Agreement, the right to receive such payments shall not be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, encumbrance, or charge; and any attempt to so anticipate, alienate, sell, transfer, assign, pledge, encumber or charge the same shall be void. Such rights shall not in any manner be liable for or subject to the debts, contracts, liabilities, engagements or torts of the Employee.

7. Prohibition Against Funding. The Corporation's obligation to pay benefits under this Agreement is only a contractual obligation and nothing herein shall be deemed to require the Corporation to segregate assets or otherwise fund this obligation. Further, nothing contained in this Agreement and no action taken pursuant to the provisions of this Agreement shall create or be construed to create a trust of any kind or a fiduciary relationship between the Corporation and the Employee or any other person.

8. Incompetence or Death. If the Board of Directors of the Corporation finds that the Employee is unable to care for her affairs, any payment due (unless a prior claim therefore shall have been made by a duly appointed guardian, committee, or other legal representative) may be paid to the spouse, child, or to any person deemed by the Board to have incurred expenses for the Employee, in such manner and proportions as the Board may determine. Any such distribution of the full payment due shall be a complete discharge of the liabilities of the Corporation under this Agreement.

6

---

If the Employee dies, any payment due the Employee shall be made to such persons as the Employee shall designate in writing before her death, or upon failure to make such designation, then to the Employee's surviving spouse, or if none, to whomsoever she shall appoint by will.

9. Legal Costs. If the Corporation shall fail to pay or provide for payment of any amounts required to be paid or provided for hereunder at any time, the Employee shall be entitled to consult with counsel, and the Corporation agrees to pay the reasonable fees and expenses of independent counsel for the Employee in advising her or in bringing any proceedings, or in defending any proceedings, involving the Employee's rights under this Agreement, such right to reimbursement to be immediate upon the presentment by Employee of written billings for such reasonable fees and expenses. The Employee shall be entitled to the prime rate of interest as published in the daily Wall Street Journal or other national daily business publication for any payments of such expenses, or any other payments under this Agreement, that are overdue.

10. Waiver. A waiver of any breach of this Agreement shall not be a waiver of any subsequent, similar or dissimilar, breach of any provision hereof.

11. Termination for Cause. In the event the Employee is terminated for cause, this Supplemental Executive Retirement Plan Agreement shall be terminated.

For purposes of this Agreement, "cause" means (i) fraud, misappropriation or intentional material damage to the property or business of the Corporation; commission of a felony; (ii) continuance of (A) willful and repeated failure by the Employee to perform her duties or (B) violation of a basic policy of the Corporation concerning the scope of the authority of the Employee, in either case after written notice to the Employee by the Board of Directors specifying such failure, providing that such "cause" shall have been found by a majority vote of the Board of Directors of the Corporation after at least 10 days written notice to the executive specifying the cause proposed to be claimed and after an opportunity for the Employee to be heard at meetings of such Board of Directors; or (iii) a violation of paragraphs 4.1 or 4.2 of this Agreement.

12. Notices. Any notice required or permitted to be given hereunder shall be in writing and given personally or by registered or certified mail, return receipt requested, addressed, in the case of notice to the Employee, at her then principal residence according to the records of the Corporation, or in the case of notice to the Corporation, to it at its then principal offices. Any notice by such mail shall be deemed to have been given when mailed.

7

---

13. Entire Agreement. This Agreement constitutes the entire understanding of the Employee and the Corporation with respect to the subject matter hereof and supersedes any and all prior understandings written or oral. This Agreement may not be changed, modified, or discharged orally, but only by an instrument in writing signed by the parties. This Agreement shall be governed by the laws of the State of Maryland and the invalidity or lack of enforceability of any provisions hereof shall in no way affect the validity or enforceability of any other provision.

IN WITNESS WHEREOF, the Corporation has caused this Agreement to be executed on its behalf and its corporate seal to be hereunto affixed by its duly appointed officers, and the Employee has set her hand and seal to this Agreement, all as of the date first above written.

SPHERIX INCORPORATED

(SEAL)

Attest

\_\_\_\_\_  
Katherine M. Brailer  
Corporate Secretary

By

\_\_\_\_\_  
Lionel V. Baldwin  
Chairman, Compensation Committee

Witness

\_\_\_\_\_  
M. Karen Levin

**Spherix Incorporated**

---

**AMENDED AND RESTATED  
EMPLOYMENT AGREEMENT**

**THIS AMENDED AND RESTATED EMPLOYMENT AGREEMENT (this "Agreement")**, is entered into as of the 15th day of May, 2002, between Spherix Incorporated, a Delaware corporation (the "Corporation"), and Gilbert V. Levin (the "Executive").

**WITNESSETH:**

**WHEREAS**, the Corporation is engaged in providing information services in health, pharmaceutical and civic areas; in providing services in the areas of chemistry, biology, exobiology, microbiology, occupational health, air and water pollution and hazardous wastes control, industrial hygiene; and in the development of proprietary products; and

**WHEREAS**, the Executive has been engaged as an expert and corporate executive in major enterprises in the areas indicated above; and

**WHEREAS**, the Executive is presently, and has been since the formation of the Corporation, an Executive of the Corporation; and

**WHEREAS**, during the period of the Executive's employment the Corporation has greatly enhanced its activities and prestige largely as a result of the activities on behalf of the Corporation by the Executive; and

**WHEREAS**, the Executive has led the Company's effort to commercialize its non—fattening sugar as a major food products ingredient and for other non-food uses, and its safe—for—humans pesticides; and

**WHEREAS**, the value of the services provided by the Executive to the Corporation in the past have had a value in excess of the compensation actually paid to the Executive by the Corporation; and

**WHEREAS**, the Corporation desires to provide additional compensation to the Executive for the services previously rendered to the Corporation in order to assure that the Executive will continue to render substantial services to the Corporation and to any joint venture or subsidiary which may be formed to exploit its products and services,

**NOW, THEREFORE**, in consideration of the mutual promises and covenants herein set forth and other good and valuable consideration, the receipt of which is hereby acknowledged, the Corporation and the Executive do hereby agree, each with the other, as follows:

1

---

**1. Full-time Employment of Executive.**

**1.1. Duties and Status.**

1.1.1. The Corporation hereby engages the Executive as a full-time executive employee for the period (the "Employment Period") specified in Section 4 and the Executive accepts such employment, on the terms and conditions set forth in this Agreement. During the Employment Period, the Executive shall exercise such authority and perform such executive duties as are commensurate with the authority being exercised and duties being performed by the Executive for the Corporation immediately prior to the effective date of this Agreement.

1.1.2. During the Employment Period, the Executive shall (i) devote his full time and efforts to the business of the Corporation and its subsidiaries or affiliates, including, without limitation, efforts to commercialize its non—fattening sugar and/or other products and will not engage in consulting work or any trade or business for his own account or for or on behalf of any other person, firm or corporation which competes, conflicts or interferes with the performance of his duties hereunder in any way and (ii) accept such additional office or offices to which he may be elected by the Board of Directors of the Corporation or its subsidiaries or affiliates, including, without limitation, any joint venture or subsidiary formed to commercialize the Company's non—fattening sugar and/or other products, provided that the performance of the duties of such office or offices shall be consistent with the scope of the duties provided for in Section 1.1.1.

1.1.3. The Executive shall be required to perform the services and duties provided for in Section 1.1.1. only at the location where the Executive was employed immediately prior to the effective date of this Agreement or such other location of the principal executive offices of the Corporation in the Washington, D.C. greater metropolitan area as the Board of Directors of the Corporation may designate, and/or scheduled telecommuting via the internet from home as approved by the Compensation Committee and the Board of Directors of the Company at their May 15, 2002, Meetings. The Executive shall be entitled to vacation, leave of absence, and leave for illness or temporary disability in accordance with the policies of the Corporation in effect, which shall not be less favorable than those in effect at the date of this Agreement; and any leave on account of illness or temporary disability which is short of total disability, as defined in the Corporation's long-term disability insurance plan ("Total Disability"), shall not constitute a breach by the Executive of his agreements hereunder.

**1.2. Compensation and General Benefits.** As compensation for his services under this Agreement, the Executive shall be compensated as follows:

1.2.1. The Corporation shall pay the Executive an annual base salary of **\$233,500**. Such salary shall increase annually by the greater of (i) three percent (3%) over the previous year or (ii) at such greater amount as is determined by the Board of Directors of the Corporation. Such salary shall be payable in equal, semi-monthly installments. Such salary shall be subject to normal periodic review at least annually for increases based on the policies of the Corporation and contributions to the enterprises, but in no event shall such base salary be adjusted downward.

1.2.2. The Executive shall be eligible to participate in such profit—sharing, stock option, bonus, incentive and performance award programs which provide opportunities to receive compensation which are the greater of the opportunities (i) then provided by the Corporation to executives with reasonably comparable authority and duties (and in any event not lesser than those provided to executives with junior authority or duties), or (ii) available to the Executive immediately prior to the effective date of this Agreement.

1.2.3. The Executive shall be entitled to receive employee benefits, including, without limitation, pension, disability, group life, sickness, accident and health insurance programs and split-dollar life insurance programs, and perquisites provided by the Corporation to executives which are the greater of the employee benefits and perquisites (i) then provided by the Corporation to executives with comparable authority or duties (and in any event not lesser than those provided to executives with junior authority or duties), or (ii) available to the Executive immediately prior to the effective date of this Agreement. The health insurance benefits received by the Executive shall continue for the Executive and the Executive's spouse following the retirement of the Executive and until the death of the survivor of the Executive and the Executive's spouse.

1.2.4. The Corporation shall pay for continuous, lifetime, long-term care insurance for Dr. and Mrs. Levin in recognition of their years of service to the Company.

1.2.5. The Corporation shall reimburse the Executive for all reasonable expenses incurred by the Executive in the performance of his duties hereunder.

## 2. **Competition; Confidential Information.**

2.1. **General.** The Executive and the Corporation recognize that due to the nature of his prior association with the Corporation and of his engagements hereunder, and the relationship of the Executive to the Corporation, both in the past as an executive and in the future hereunder, the Executive has had access to and has acquired, will have access to and will acquire, and has assisted in and may assist in developing, confidential and proprietary information relating to the business and operations of the Corporation and its affiliates, including, without limiting the generality of the foregoing, information with respect to their present and prospective research projects; products, systems and processes (whether or not patentable); customers and agents; and sales and marketing methods. The Executive acknowledges that such information has been and will continue to be of central importance to the business of the Corporation and its affiliates and that disclosure of it to or its use by others could cause substantial loss to the Corporation. The Executive and the Corporation also recognize that an important part of the Executive's duties will be to develop good will for the Corporation and its affiliates through his personal contact with customers, agents and others having business relationships with the Corporation and its affiliates, and that there is a danger that this good will, a proprietary asset of the Corporation and its affiliates, may follow the Executive if and when his relationship with the Corporation is terminated. The Executive accordingly agrees as follows:

### 2.2. **Non-Competition.**

2.2.1. During the Employment Period the Executive will not, directly or indirectly, either individually or as owner, partner, agent, employee, consultant or otherwise, except for the account of and on behalf of the Corporation or their affiliates, engage in any activity

competitive with the business of the Corporation or its affiliates, nor will he, in competition with the Corporation or its affiliates, solicit or otherwise attempt to establish for himself or any other person, firm or entity, any business relationships with any person, firm or corporation which was, at any time during the Employment Period, a customer of the Corporation or one of its affiliates.

2.2.2. Nothing in this Section 2.2. shall be construed to prevent the Executive from owning, as an investment, not more than 1% of a class of equity securities issued by any competitor of the Corporation or its affiliates and publicly traded and registered under Section 12 of the Securities Exchange Act of 1934.

2.3. **Trade Secrets.** The Executive will keep confidential any trade secrets or confidential or proprietary information of the Corporation and its affiliates which are now known to him or which hereafter may become known to him as a result of his employment or association with the Corporation and shall not at any time directly or indirectly disclose any such information to any person, firm or corporation, or use the same in any way other than in connection with the business of the Corporation or its affiliates during and at all times after the expiration of the Employment Period. For purposes of this Agreement, "trade secrets or confidential or proprietary information" means information unique to the Corporation or any of its affiliates which has a significant business purpose and is not known or generally available from sources outside the Corporation or any of its affiliates or typical of industry practice.

2.4. **Intellectual Property.** Throughout the Employment Period, the Executive will disclose to the Corporation all processes, operations, products or improvements developed by him which relate directly or indirectly to the business of the Corporation or its affiliates which may be patentable or copyrightable. The Executive agrees that such will be the property of the Corporation and that he will, at the Corporation's request and cost, do whatever is necessary to secure the rights thereto by patent or copyright.

3. **Corporation's Remedies for Breach.** It is recognized that damages in the event of breach of Section 2 by the Executive would be difficult, if not impossible, to ascertain, and it is therefore agreed that the Corporation, in addition to and without limiting any other remedy or right they may have, shall have the right to an injunction or other equitable relief in any court of competent jurisdiction, enjoining any such breach, and the Executive hereby waives any and all defenses he may have on the ground of lack of jurisdiction or competence of the court to grant such an injunction or other equitable relief. The existence of this right shall not preclude any other rights and remedies at law or in equity which the Corporation may have.

## 4. **Employment Period.**

4.1. **Duration.** The Employment Period shall commence on the effective date of this Agreement and shall continue until the earlier of (i) close of business on December 31, 2004 or (ii) any termination of this Agreement that does not constitute an improper termination as defined in Section 4.3.1.

## 4.2. Termination Payments.

4.2.1. In the event of an improper termination of this Agreement (as defined in Section 4.3.1. of this Agreement), the Corporation shall pay to the Executive and provide him with the following:

4.2.1.1. During the remainder of the Employment Period, the Corporation shall continue to pay the Executive his salary at the rate and as required by Section 1.2.1 and in effect immediately prior to the date of termination.

4.2.1.2. During the remainder of the Employment Period, the Executive shall continue to be treated as an executive (at the level provided for in Section 1.1.1.) under the provisions of the Corporation's profit-sharing, bonus, incentive and performance award programs and any other incentive compensation arrangement described in Section 1.2.2. In addition, the Executive shall continue to be entitled to all benefits and service credits for benefits under any pension plan, or medical, insurance, split-dollar life insurance and other employee benefit plans, programs and arrangements of the Corporation described in Section 1.2.3. as if he were still employed during such period under this Agreement

4.2.1.3. If, despite the provisions of Section 4.2.1.2., benefits or the right to accrue further benefits under any profit sharing, bonus, incentive or performance award programs or other long-term incentive compensation arrangement described in Section 1.2.2. shall not be provided under any such arrangement to the Executive, or his dependents, beneficiaries and estate, because he is no longer an employee of the Corporation, the Corporation shall, to the extent necessary, provide, pay or provide for payment of amounts equal to the after tax benefits to the Executive, his dependents, beneficiaries and estate.

4.2.1.4. If, despite the provisions of Section 4.2.1.2., benefits or service credits under any employee benefit plan, including, without limitation, benefits under any pension plan, or any medical, insurance, split-dollar life insurance and other employee benefit plans, programs and arrangements described in Section 1.2.3. shall not be payable or provided under any such plan to the Executive, or his dependents, beneficiaries and estate, because he is no longer an employee of the Corporation, the Corporation shall, to the extent necessary, pay or provide for payment of equivalent after tax benefits and service credits for such after tax benefit to the Executive, his dependents, beneficiaries and estate.

4.2.1.5. The Executive shall not be required to mitigate the amount of any payment provided for in this Section 4.2. by seeking employment or otherwise, nor shall the amount of any payment provided for in this Section 4.2 be reduced by any compensation or remuneration earned by the Executive as the result of employment by another employer, or self-employment, or as a partner, after the date of termination or otherwise.

4.2.2. In the event of an improper termination, the Executive may elect, within 60 days after such termination, to elect to be paid a lump sum severance allowance, in lieu of termination payments, in an amount which is equal to the sum of all of the salary payments which he would have been entitled to receive in accordance with Section 4.2.1.1. In the event that the Executive makes an election pursuant to the preceding sentence to receive a lump sum severance

allowance, then, in addition to such amount, he shall accelerate all future payments due with respect to (i) the pension benefits he would have accrued under any pension benefit plan maintained by the Corporation if he had remained in the employ of the Corporation for the remainder of the Employment Period, which benefits will be paid concurrently with, and in addition to, the benefits provided under such pension benefit plan, (ii) incentive compensation (including, but not limited to the right to participate in all of the Corporation's profit sharing plans and to receive and exercise stock options and stock appreciation rights and to receive bonuses and performance awards and similar incentive compensation benefits) to which he would have been entitled under this Agreement if he had remained in the employ of the Corporation for the remainder of the Employment Period, and (iii) employee benefits (including, but not limited to, coverage under any disability, group life, sickness, accident and health insurance programs, split-dollar life insurance arrangements or programs and prerequisite) to which he would have been entitled under this Agreement if he had remained in the employ of the Corporation for the remainder of the Employment Period. By accelerating all future payments as described in this Section 4.2.2., the Executive will have the right to receive an amount equal to the commuted actuarial value of those payments within sixty (60) days after the date of Executive's termination.

4.2.3. In the event of a termination other than an improper termination, the Executive shall be entitled to any salary accrued to the date of the termination, but shall not be entitled to any further salary or any further payments hereunder.

## 4.3. Definitions. The following terms shall have the specified meanings when used in the Sections specified:

4.3.1. In this Section 4, the term "improper termination" means termination (i) by the Corporation of the employment of the Executive with the Corporation for any reason other than death or Total Disability of the Executive, or cause; or (ii) of the employment of the Executive by resignation of the Executive due to (A) a significant change in the nature or scope of his authorities or duties from those contemplated in Section 1.1.1., (B) a merger or consolidation of the Corporation or other similar transaction which is likely to materially and adversely affect the financial ability of the Corporation or any successor assign thereto that agrees in writing to assume the obligations of the Corporation hereunder to perform this Agreement, (C) a reduction in total compensation and benefits from that provided in Section 1.2, or (D) the breach by the Corporation in any material respect of any other provision of this Agreement.

4.3.2. In Section 4.3.1. the term "cause" means (i) a final judicial finding that Executive has been guilty of fraud, misappropriation or intentional material damage to the property or business of the Corporation or the commission of a felony; (ii) continuance of willful and repeated failure by the Executive to perform his duties in compliance with this Agreement after written notice to the Executive by the Board of Directors specifying such failure, provided that such "cause" shall have been found by a majority vote of the Board of Directors of the Corporation after at least 10 days' written notice to the Executive specifying the cause proposed to be claimed and after an opportunity for the Executive to be heard at meetings of such Boards of Directors; or (iii) a violation of Section 2 of this Agreement.

4.3.3. In Section 4.2., "Employment Period" shall mean the full period for which the Employment Period would have continued, without any improper termination, under Section 4.3.1.

4.3.4. In Section 2.2.1., "Employment Period" shall mean the full period for which the Employment Period would have continued under Section 4.1. in the event of any termination of the employment of the Executive which is not an improper termination as defined in Section 4.3.1.

5. **Legal Costs.** If the Corporation shall fail to pay or provide for payment of any amounts required to be paid or provided for hereunder at any time, the Executive shall be entitled to consult with counsel, and the Corporation agrees to pay the reasonable fees and expenses of independent counsel for the Executive in advising him or in bringing any proceedings, or in defending any proceedings, involving the Executive's rights under this Agreement, such right to reimbursement to be immediate upon the presentment by Executive of written billings for such reasonable fees and expenses. The Executive shall be entitled to the prime rate of interest established from time to time at Bank of America, or its successors or successors in interest for any payments of such expenses, or any other payments under this Agreement, that are overdue.

6. **Notices.** Any notices, requests, demands and other communications provided for by this Agreement shall be sufficient if in writing and if sent by registered or certified mail to the Executive at the last address he has filed in writing with the Corporation or, in the case of the Corporation, at its principal executive offices.

7. **Binding Agreement.** This Agreement shall be effective as of the effective date hereof and shall be binding upon and inure to the benefit of the Executive, his executors, administrators and personal representatives. The rights and obligations of the Corporation under this Agreement shall inure to the benefit of and shall be binding upon any successor of the Corporation as defined in Section 1-101(u) of the Maryland General Corporation Law as now in effect; provided, that this Agreement may not be assigned by the Corporation without the consent of the Executive, and in the case of a successor by transfer of all or substantially all of the assets of the Corporation, or any other successor in which the Corporation does not cease to exist by operation of the transaction in question as a matter of law, the Corporation shall not be relieved of its obligations hereunder.

8. **Entire Agreement.** This Agreement constitutes the entire understanding of the Executive and the Corporation with respect to the subject matter hereof and supersedes any and all prior understandings written or oral (including but not limited to the Employment Agreement dated as of November 17, 1995, as amended, between the Corporation and the Executive). This Agreement may not be changed, modified, or discharged orally, but only by an instrument in writing signed by the parties. This Agreement shall be governed by the laws of the State of Maryland and the invalidity or unenforceability of any provisions hereof shall in no way affect the validity or enforceability of any other provision.

9. **Indemnification.** In addition to any indemnification rights the Executive may have by statute, by—law or otherwise, the Corporation to the fullest extent permitted by, and in accordance with and subject to the requirements of, the General Corporation Law of the State of Delaware, (i) shall indemnify the Executive and hold him harmless for all losses, costs, expenses or liabilities

7

---

(whether or not arising during the Employment and pay all expenses, including reasonable attorneys' fees and court fees, actually and necessarily incurred by the Executive in connection with the investigation or defense of, or being a witness in, any such action, suit or proceeding and in connection with any appeal thereof.

10. **Other Agreements.** Each of the Supplemental Executive Retirement Plan Agreement dated as of February 17, 1993, by and between the Corporation and the Executive (the "SERP Agreement"), and the Consulting Agreement dated as of February 17, 1993, by and between the Corporation and the Executive (the "Consulting Agreement") are amended by deleting from Section 1 thereof the phrase "Employment Agreement dated December 31, 1987" and substituting in lieu thereof the phrase "Amended and Restated Employment Agreement dated May 15, 2002".

The Deferred Compensation Agreement dated as of March 13, 1981, by and between the Corporation and the Executive, and amended on October 14, 1982, and December 31, 1987, is amended by deleting from the second Whereas of the December 31, 1987 Amendment the phrase "January 27, 1995" and substituting in lieu thereof the phrase "until the end of the Employment Period as defined in Section 4.1 of the Executive's Employment Agreement dated May 15, 2002."

In all other respects, the SERP Agreement, the Consulting Agreement, and the Deferred Compensation Agreement are ratified and confirmed as of the date hereof.

**IN WITNESS WHEREOF**, the parties have executed, under seal, and delivered this Agreement the date first above written.

SPHERIX INCORPORATED  
Board of Directors

(SEAL)

ATTEST:  
Katherine M. Brailer  
Corporate Secretary

By:  
Lionel V. Baldwin, Chair  
Compensation Committee

WITNESS:  
By:  
Gilbert V. Levin

8



**Spherix Incorporated**

---

CONSENT OF INDEPENDENT ACCOUNTANTS

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 10, 2003, on our audit of the financial statements of Spherix Incorporated as of December 31, 2002, and for each of the three years ended December 31, 2002, 2001 and 2000, which report is included in this Annual Report on Form 10-K.

/s/ Grant Thornton LLP

Vienna, Virginia  
March 26, 2003

---

**Spherix Incorporated**

---

**Certification of  
Chief Executive Officer  
Pursuant to 18 U.S.C. Section 1350**

I, Gilbert V. Levin, Chair, Chief Executive Officer, and Treasurer of Spherix Incorporated (the "Company"), in compliance with 18 U.S.C. Section 1350, as adopted pursuant to 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, 2002 (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/ Gilbert V. Levin

---

Gilbert V. Levin  
Chair, CEO and Treasurer  
February 20, 2003

---

**Spherix Incorporated**

---

**Certification of  
Chief Financial Officer  
Pursuant to 18 U.S.C. Section 1350**

I, Richard C. Levin, Chief Financial Officer and VP, Administration of Spherix Incorporated (the "Company"), in compliance with 18 U.S.C. Section 1350, as adopted pursuant to 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, 2002 (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

CFO and VP, Administration

February 20, 2003

---