UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

# FORM 10-Q

(Mark one)

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2009

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

For the transition period from _____ to _____

Commission file number 0-5576

# SPHERIX INCORPORATED

(Exact name of Registrant as specified in its charter)

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

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

301-897-2540
(Registrant's telephone number, including area code)

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

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files.)
Yes [ ] No [ ]

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.
Large Accelerated Filer [ ] Accelerated Filer [ ] Non-accelerated Filer [ ] Smaller Reporting Company [X]

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

Indicate the number of shares outstanding of each of the Registrant's classes of Common Stock, as of the latest practicable date.

| Class | Outstanding as of November 2, 2009 |
|---|---|
| Common Stock, $0.005 par value | 14,389,778 shares |

# Spherix Incorporated

**Form 10-Q**
**For the Quarter Ended September 30, 2009**

**Index**

# Part I. Financial Information

## Item 1. Financial Statements

### Consolidated Statements of Operations
(Unaudited)

| | Three Months Ended Sept. 30, | | Nine Months Ended Sept. 30, | |
|---|---|---|---|---|
| | 2009 | 2008 | 2009 | 2008 |
| **Revenue** | $ 378,365 | $ 307,714 | $ 1,071,276 | $ 713,773 |
| Operating expense | | | | |
| Direct costs | 125,653 | 128,386 | 365,318 | 288,805 |
| Research and development expense | 1,435,282 | 1,304,150 | 4,130,633 | 3,045,299 |
| Selling, general and administrative expense | 974,972 | 671,017 | 2,383,338 | 2,513,227 |
| Total operating expense | 2,535,907 | 2,103,553 | 6,879,289 | 5,847,331 |
| **Loss from operations** | (2,157,542) | (1,795,839) | (5,808,013) | (5,133,558) |
| Interest income | 5,386 | 68,611 | 35,233 | 293,823 |
| Other expense | - | (8,214) | - | (8,214) |
| Loss before taxes | (2,152,156) | (1,735,442) | (5,772,780) | (4,847,949) |
| Income tax expense | - | - | - | - |
| **Net loss** | $ (2,152,156) | $ (1,735,442) | $ (5,772,780) | $ (4,847,949) |
| Net loss per share, basic | $ (0.15) | $ (0.12) | $ (0.40) | $ (0.34) |
| Net loss per share, diluted | $ (0.15) | $ (0.12) | $ (0.40) | $ (0.34) |
| Weighted average shares outstanding, basic | 14,385,810 | 14,357,162 | 14,371,452 | 14,338,217 |
| Weighted average shares outstanding, diluted | 14,385,810 | 14,357,162 | 14,371,452 | 14,338,217 |

See accompanying notes to financial statements.

# Spherix Incorporated

## Consolidated Balance Sheets

| ASSETS | Sept. 30, 2009 (Unaudited) | December 31, 2008 |
|---|---|---|
| Current assets | | |
| Cash and cash equivalents | $ 5,292,398 | $ 9,404,843 |
| Short-term investments | 985,002 | 1,894,434 |
| Trade accounts receivable | 484,849 | 281,342 |
| Other receivables | 1,535 | 37,223 |
| Prepaid expenses and other assets | 6,977 | 282,971 |
| Total current assets | 6,770,761 | 11,900,813 |
| Property and equipment, net | 243,955 | 310,365 |
| Patents, net of accumulated amortization of $43,140 and $38,588 | 9,881 | 14,433 |
| Deposit | 35,625 | 35,625 |
| Total assets | $ 7,060,222 | $ 12,261,236 |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| Current liabilities | | |
| Accounts payable and accrued expenses | $ 1,177,206 | $ 710,881 |
| Accrued salaries and benefits | 342,303 | 304,756 |
| Deferred revenue | 116,351 | 39,347 |
| Total current liabilities | 1,635,860 | 1,054,984 |
| Deferred compensation | 600,000 | 660,000 |
| Deferred rent | 116,078 | 136,736 |
| Total liabilities | 2,351,938 | 1,851,720 |
| Commitments and contingencies | - | - |
| Stockholders' equity | | |
| Preferred stock, $0.01 par value, 2,000,000 shares authorized; none issued and outstanding | - | - |
| Common stock, $0.005 par value, 50,000,000 shares authorized; 14,470,216 and 14,437,600 issued, and 14,389,778 and 14,357,162 shares outstanding at September 30, 2009 and December 31, 2008 | 72,351 | 72,188 |
| Paid-in capital in excess of par value | 27,673,871 | 27,602,486 |
| Treasury stock, 80,438 shares, at cost at September 30, 2009 and December 31, 2008 | (464,786) | (464,786) |
| Accumulated deficit | (22,573,152) | (16,800,372) |
| Total stockholders' equity | 4,708,284 | 10,409,516 |
| Total liabilities and stockholders' equity | $ 7,060,222 | $ 12,261,236 |

See accompanying notes to financial statements.

## Spherix Incorporated

### Consolidated Statements of Cash Flows
(Unaudited)

| | Nine Months Ended Sept. 30, | |
|---|---|---|
| | **2009** | **2008** |
| **Cash flows from operating activities** | | |
| Net loss | $(5,772,780) | $(4,847,949) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 64,863 | 60,146 |
| Loss (gain) on disposal of assets | 5,399 | (4,840) |
| Stock-based compensation | 71,548 | 86,320 |
| Changes in assets and liabilities: | | |
| Accounts receivable | (203,507) | (241,693) |
| Other receivables | 35,688 | - |
| Prepaid expenses and other assets | 275,994 | 185,285 |
| Accounts payable and accrued expenses | 503,872 | (431,331) |
| Deferred rent | (20,658) | (13,184) |
| Deferred compensation | (60,000) | (14,000) |
| Deferred revenue | 77,004 | (323) |
| Net cash used in operating activities | (5,022,577) | (5,221,569) |
| **Cash flow from investing activities** | | |
| Purchases of short-term investments | - | (2,944,664) |
| Proceeds from the maturity of short-term investments | 909,432 | - |
| Purchases of property and equipment | - | (181,203) |
| Proceeds from the sale of fixed assets | 700 | 15,187 |
| Net cash provided by (used in) investing activities | 910,132 | (3,110,680) |
| **Cash flows from financing activities** | | |
| Net change in book overdraft | - | (33,302) |
| Net cash used in financing activities | - | (33,302) |
| **Net decrease in cash and cash equivalents** | (4,112,445) | (8,365,551) |
| **Cash and cash equivalents, beginning of period** | 9,404,843 | 15,839,959 |
| **Cash and cash equivalents, end of period** | $ 5,292,398 | $ 7,474,408 |

See accompanying notes to financial statements.

## Notes to Consolidated Financial Statements
(Unaudited)

### 1. Basis of Presentation

The accompanying consolidated financial statements of the Company are unaudited and do not include all of the information and disclosures generally required for annual financial statements. In the opinion of management, the statements contain all material adjustments (consisting of normal recurring accruals) necessary to present fairly the Company's financial position as of September 30, 2009, the results of its operations for the three-month and nine-month periods ended September 30, 2009 and 2008, and its cash flows for the nine-month periods ended September 30, 2009 and 2008. This report should be read in conjunction with the Company's Annual Report on Form 10-K, which does contain the complete information and disclosure for the year ended December 31, 2008.

The Company operates via two segments, Biospherics and Health Sciences. Biospherics seeks to develop a single proprietary product for commercial application. Health Sciences provides technical and regulatory consulting services to biotechnology and pharmaceutical companies, as well as providing technical support for the Biospherics segment.

The Company has created two wholly-owned subsidiaries, Biospherics Incorporated and Spherix Consulting, Inc., for its two operating segments. The Company's Health Sciences contracts are now in the name of Spherix Consulting, Inc. and the Company's patents and other assets and operations are in the process of being transferred into the name of Biospherics Incorporated. The subsidiaries began operations on January 1, 2009. Spherix now provides management, strategic guidance, business development, marketing and other services to its subsidiaries.

### 2. Liquidity and Capital Resources

The Company's working capital was $5.1 million as of September 30, 2009. Over the next 12 months, the Company expects to expend between $8 million and $10 million as it increases its commercialization activities. To fund its activities, the Company will seek to raise additional capital through the sale of its stock. To facilitate this effort, the Company has filed an S-3 Registration Statement with the SEC.

The total cost of completing the Phase 3 clinical trial for D-tagatose is difficult to determine and can be affected by any number of factors including, but not limited to, the time to complete the trial. We cannot make assurances as to whether the Company will be successful in its efforts to raise the additional funds needed to complete the trial.

### 3. Use of Estimates and Assumptions

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

### 4. New Accounting Pronouncements

In June 2009, the Financial Accounting Standards Board (FASB) established the FASB Accounting Standards Codification (Codification) as the source of authoritative U.S. generally accepted accounting principles (GAAP) recognized by the FASB to be applied to nongovernmental entities and rules and interpretive releases of the SEC as authoritative GAAP for SEC registrants. The Codification supersedes all the existing non-SEC accounting and reporting standards upon its effective date and subsequently, the FASB will not issue new standards in the form of Statements, FASB Staff Positions or Emerging Issues Task Force Abstracts. This guidance is effective for interim periods ending after September 15, 2009. We adopted this guidance for the period ended September 30, 2009, with no effect on our consolidated results of operations and financial condition for the three and nine months ended September 30, 2009.

In October 2009, the FASB issued ASC Update No. 2009-13, which amends the Revenue Recognition topic of the Codification. This update provides amendments to the criteria in Subtopic 605-25 of the Codification for separating consideration in multiple-deliverable arrangements. As a result of those amendments, multiple-deliverable arrangements will be separated in more circumstances than under existing U.S. GAAP. The amendments establish a selling price hierarchy for determining the selling price of a deliverable and will replace the term *fair value* in the revenue allocation guidance with *selling price* to clarify that the allocation of revenue is based on entity-specific assumptions rather than assumptions of a marketplace participant. The amendments will also eliminate the residual method of allocation and require that arrangement consideration be allocated at the inception of the arrangement to all deliverables using the relative selling price method and will require that a vendor determine its best estimate of selling price in a manner that is consistent with that used to determine the price to sell the deliverable on a stand-alone basis. These amendments will be effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010, with early adoption permitted. We are currently evaluating the impact the adoption of this update might have on our results of operations and financial position.

In October 2009, the FASB issued ASC Update No. 2009-14, which amends the Software topic of the Codification. The amendments in this update change the accounting model for revenue arrangements that include both tangible products and software elements. Tangible products containing software components and nonsoftware components that function together to deliver the tangible product's essential functionality are no longer within the scope of the software revenue guidance in Subtopic 985-605 of the Codification. In addition, the amendments in this update require that hardware components of a tangible product containing software components always be excluded from the software revenue guidance. In that regard, the amendments provide additional guidance on how to determine which software, if any, relating to the tangible product also would be excluded from the scope of the software revenue guidance. The amendments also provide guidance on how a vendor should allocate arrangement consideration to deliverables in an arrangement that includes both tangible products and software. The amendments also provide further guidance on how to allocate arrangement consideration when an arrangement includes deliverables both included and excluded from the scope of the software revenue guidance. These amendments will be effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010, with early adoption permitted. We are currently evaluating the impact the adoption of this update might have on our results of operations and financial position.

In December 2007, the FASB revised the authoritative guidance for business combinations, which establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, liabilities assumed, and any noncontrolling interest in the acquiree in a business combination. The guidance establishes principles stipulating how goodwill acquired in a business combination or a gain from a bargain purchase should be recognized and measured under a method established by the guidance referred to as the acquisition method. The guidance also expands the disclosure requirements related to the nature and financial impact of business combinations. We adopted this guidance as of January 1, 2009 and the adoption did not have a material impact on our financial position, results of operations or cash flows.

In December 2007, the FASB revised the authoritative guidance for consolidation, which establishes accounting and reporting standards for the noncontrolling interest in a subsidiary and for the deconsolidation of a subsidiary. The guidance clarifies that a noncontrolling interest in a subsidiary is an ownership interest in the consolidated entity that should be reported as equity in the consolidated financial statements. The guidance also requires consolidated net income to be reported at amounts that include the amounts attributable to both the parent and the noncontrolling interest. It also requires disclosure, on the face of the consolidated statement of income, of the amounts of consolidated net income attributable to the parent and to the noncontrolling interest. It also provides guidance when a subsidiary is deconsolidated and requires expanded disclosures in the consolidated financial statements that clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners of a subsidiary. We adopted this guidance as of January 1, 2009 and the adoption did not have a material impact on our financial position, results of operations or cash flows.

In June 2008, the FASB revised the authoritative guidance for earnings per share, which establishes that unvested share-based payment awards that contain non-forfeitable rights to dividends or dividend equivalents are participating securities and shall be included in the computation of earnings per share pursuant to the two-class method. In contrast, the right to receive dividends or dividend equivalents that the holder will forfeit if the award does not vest does not constitute a participation right and such an award does not meet the definition of a participating security in its

current form (that is, prior to the requisite service having been rendered for the award). We adopted this guidance as of January 1, 2009 and the adoption did not have a material impact on our financial position, results of operations or cash flows.

In April 2009, the FASB revised the authoritative guidance for financial instruments. The guidance requires disclosures about fair value of financial instruments in interim financial statements as well as in annual financial statements. This guidance is effective for interim periods ending after June 15, 2009. We adopted this guidance in the second quarter of 2009, and the adoption did not have a material impact on our financial position, results of operations or cash flows.

In April 2009, the FASB revised the authoritative guidance for fair value measurements and disclosures to provide additional guidance in determining whether a market for a financial asset is not active and a transaction is not distressed for fair value measurement purposes. This guidance is effective for interim periods ending after June 15, 2009. We adopted this guidance for the period ending June 30, 2009. The adoption of this guidance did not have a material impact on our financial position, results of operations or cash flows.

In April 2009, the FASB revised the authoritative guidance for investments in debt and equity securities to provide guidance in determining whether impairments in debt securities are other-than-temporary, and modifies the presentation and disclosures surrounding such instruments. This guidance is effective for interim periods ending after June 15, 2009. We adopted the provisions of this guidance for the period ending June 30, 2009. The adoption of this guidance had no material impact on our financial position, results of operations or cash flows.

In May 2009, the FASB revised the authoritative guidance for subsequent events, which establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. This guidance is effective for financial statements issued for interim and annual reporting periods ending after June 15, 2009. We adopted this guidance for the period ended June 30, 2009, and the Company is not aware of any subsequent events which would require recognition or disclosure in the consolidated financial statements.

**5. Short-term Investments**

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

**6. Fair Value Measurements**

The Company adopted the fair value method to value its financial assets and non-financial assets effective January 1, 2009. At September 30, 2009, the Company had no financial liabilities.

In accordance with the Fair Value Method and Disclosures Topic of the FASB Codification, the following table presents the Company's assets measured at fair value as of September 30, 2009, and indicates the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value. In general, fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities. Fair values determined by Level 2 inputs utilize data points that are observable such as quoted prices, interest rates and yield curves. Fair values determined by Level 3 inputs are unobservable data points for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability:

| | | Fair Value Measurement Using | | |
|---|---|---|---|---|
| **Description** | **Fair Value at September 30, 2009** | **Quoted Prices in Active Markets (Level 1)** | **Significant Other Observable Inputs (Level 2)** | **Significant Unobservable Inputs (Level 3)** |
| Debt securities | $985,000 | $ - | $985,000 | $ - |

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

**7. Net Loss Per Share**

Basic net loss per common share has been computed by dividing net loss by the weighted-average number of common shares outstanding during the year. Diluted net loss per common share has been computed by dividing net loss by the weighted-average number of common shares outstanding without an assumed increase in common shares outstanding for common stock equivalents, as common stock equivalents are antidilutive. At September 30, 2009, none of the Company's 40,500 outstanding options were considered common stock equivalents as the exercise prices were all above the average market price of the Company's common stock for the period.

**8. Accounting for Stock-Based Compensation**

For the three- and nine-months ended September 30, 2009, the Company recognized $3,000 and $10,000 in stock-based compensation expense relating to 59,000 stock options awarded in February 2006.

For the three- and nine-months ended September 30, 2009, the Company recognized $12,000 and $22,000 in stock-based compensation expense relating to 30,000 shares in restricted stock the Company granted in August 2007 to its Chief Executive Officer and 11,900 restricted shares granted in August 2009.

For the nine-months ended September 30, 2009, the Company recognized $40,000 in stock-based compensation expense relating to 26,664 shares in restricted stock issued to each of the Company's independent board members, which was recognized as compensation expense at the time of issue. The fair value of the above stock awards was based on the closing market price on the date of grant.

A summary of option activity under the Company's employee stock option plan for the nine months ended September 30, 2009, is presented below:

| Options | Shares | Weighted-Average Exercise Price | Weighted-Average Remaining Contractual Term | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding at December 31, 2008 | 40,500 | $ 2.57 | | |
| Granted | - | $ - | | |
| Exercised | - | $ - | | |
| Expired or forfeited | - | $ - | | |
| Outstanding at September 30, 2009 | 40,500 | $ 2.57 | 1.1 | $ - |
| Exercisable at September 30, 2009 | 39,000 | $ 2.59 | 1.1 | $ - |

As of September 30, 2009, there were 1,500 unvested options to purchase common stock under the plans. An estimated compensation cost of $5,000 related to these unvested options is expected to be recognized over the next year.

**9. Income Taxes**

The American Recovery and Reinvestment Act of 2009 was enacted and signed into law on February 17, 2009. The Act includes the extension of a provision passed by the United States Congress in 2008 which allows companies to accelerate the recognition of a portion of certain credits in lieu of bonus depreciation and convert the credit carryforward into currently refundable credits. The Company is evaluating the provisions of the Act but has not yet reached a decision whether it will apply any of the provisions.

## 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 operates via two segments, Biospherics and Health Sciences. Biospherics seeks to develop a single proprietary product for commercial application. Health Sciences provides technical and regulatory consulting services to biotechnology and pharmaceutical companies, as well as aiding the Biospherics segment.

Financial information by business segment for the three and nine months ended September 30, 2009 and 2008 is summarized below:

| | | Three Months Ended Sept. 30, | | Nine Months Ended Sept. 30, | |
|---|---|---|---|---|---|
| | | 2009 | 2008 | 2009 | 2008 |
| **Revenue** | Biospherics | $ - | $ - | $ - | $ 5,000 |
| | Health Sciences | 378,000 | 308,000 | 1,071,000 | 709,000 |
| | Total revenue | $ 378,000 | $ 308,000 | $ 1,071,000 | $ 714,000 |
| **Operating (Loss) Income and Loss Before Income Taxes** | Biospherics | $(1,686,000) | $(1,315,000) | $(4,513,000) | $(3,193,000) |
| | Health Sciences | 205,000 | 131,000 | 553,000 | 276,000 |
| | General | (676,000) | (612,000) | (1,848,000) | (2,217,000) |
| | Total operating loss | (2,157,000) | (1,796,000) | (5,808,000) | (5,134,000) |
| | Interest income | 5,000 | 69,000 | 35,000 | 294,000 |
| | Other expenses | - | (8,000) | - | (8,000) |
| | Loss from operations before income taxes | $(2,152,000) | $(1,735,000) | $(5,773,000) | $(4,848,000) |

| | | Sept. 30, 2009 | Dec 31, 2008 |
|---|---|---|---|
| **Identifiable Assets** | Biospherics | $ 10,000 | $ 21,000 |
| | Health Sciences | 485,000 | 296,000 |
| | General corporate assets | 6,565,000 | 11,944,000 |
| | Total assets | $ 7,060,000 | $12,261,000 |

## 11. Subsequent Events

We have evaluated all subsequent events through November 13, 2009, the date the financial statements were issued.

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following is intended to update the information contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2008, and presumes that readers have access to, and will have read, "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in such Form 10-K.

Certain statements in this Quarterly Report on Form 10-Q may contain 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 and are identified by the use of forward-looking words or phrases such as "believes," "expects," is or are "expected," "anticipates," "anticipated," "should" and words of similar impact. These forward-looking statements are based on the Company's current expectations. Because forward-looking statements involve risks and uncertainties, the Company's actual results could differ materially. See the Company's Form 8-K filing dated October 10, 2007, for a more detailed statement concerning forward-looking statements.

# Spherix Incorporated

**Overview**

The Company operates via two segments, Biospherics and Health Sciences. Biospherics seeks to develop a single proprietary product for commercial application. Health Sciences provides technical and regulatory consulting services to food, consumer products, biotechnology and pharmaceutical companies, as well as providing technical support to the Biospherics segment. The Health Sciences segment was started in July 2007.

Biospherics engages in product development of D-tagatose. The Company's focus is on the non-food uses of D-tagatose. Our efforts have been to explore whether D-tagatose is an effective treatment for Type 2 diabetes, as a prospective first-in-class drug candidate. D-tagatose is believed to depress elevations of blood sugar levels in diabetic patients by increasing glycogen synthesis while decreasing glycogen utilization, resulting in an improvement of blood sugar control and modulation of HbA1c.

The Company intends to continue to develop D-tagatose and simultaneously search for a sale, license, partner, or other strategic alliance to fully take D-tagatose through the FDA approval process and to bring D-tagatose to market. We are hopeful that as we proceed with our development efforts, incremental successes may afford us the opportunity to achieve such a strategic alliance.

The Company is conducting two clinical trials, a Phase 3 NEET (the Naturlose (D-tagatose) Efficacy Evaluation Trial) trial to determine efficacy of D-tagatose as a treatment for Type 2 diabetes under an FDA Investigational New Drug ("IND") application process, and a Phase 2 Dose Range trial to evaluate the effectiveness of lower doses of D-tagatose in treating Type 2 diabetes. The Phase 3 trial and the Dose Range trial are expected to be completed in mid- to late-2010. The primary endpoint in each study is a statistically significant decrease in HbA1c levels. HbA1c is a key indicator of Type 2 diabetes that monitors glycated hemoglobin in the blood. The secondary endpoints are measured in fasting blood glucose, insulin, and lipid profiles, changes in body weight, and the proportion of subjects achieving HbA1c targets under 7% and/or under 6.5%.

The ongoing double-blind, placebo-controlled Phase 3 trial is designed to evaluate the safety and efficacy of D-tagatose over the dosing period. The study is currently underway at 44 clinical research sites in the USA and India, and seeks to complete 332 patients. The study is powered to detect a 0.5% change in HbA1c. The primary efficacy analysis will compare the change in HbA1c in patients receiving D-tagatose versus a placebo.

Results of the blinded interim data analysis of the Phase 3 trial demonstrate a significant reduction in variability of HbA1c levels, the primary endpoint of the trial. The analysis was conducted by an independent statistics and regulatory consulting firm. The results indicate the study is powered sufficiently and the planned sample size is adequate to detect a statistically significant effect in reduction of HbA1c. The observed data to-date indicate the change in variability of HbA1c from baseline is favorable, and the current sample size gives the study sufficient power to achieve the statistical significance if and when the study reaches the planned number of patients completing treatment. The results also demonstrate a significant decrease in the mean body mass index (BMI) at all baseline time points. The mean BMI and serum triglycerides decreased monotonically at each visit, while the relationship between LDL or HDL cholesterol and visit number was non-monotonic. Taken together, the results of these secondary variables are in agreement with that of the HbA1c results. The interim analysis is a blinded analysis and there is no statistical penalty.

In addition to the power calculation, a summary of HbA1c "responders" (i.e., subjects achieving HbA1c target of <6.5%) was in the interim analysis report. NIH Medline Plus states that, in general, an HbA1c of 6% or less is normal, and diabetic patients should try to keep their HbA1c level at or below 7%. The NEET protocol sets an HbA1c lower limit of 6.6% for randomization into the trial, and an upper limit of 9%. At the time of the interim analysis, not all subjects had finished the entire treatment course of this trial; therefore the number of responders was different for different months of therapy. The incidences of responders achieving an HbA1c target of <6.5% at 1, 2, 4 and 6 months of treatment were 4%, 13%, 19% and 18% respectively. Because the trial is randomized 1:1 in terms of drug and placebo, approximately 50% of the patients receive the placebo treatment.

In addition, preliminary data from the Dose Range study demonstrates reductions of HbA1c levels at doses lower than those used in the current Phase 3 trial. The doses being tested are: 2.5, 5.0, and 7.5 g, which are administered orally with meals, three times daily. After 6 months on drug, patients in the 7.5 g group experienced an average reduction of 0.3% in HbA1c over those of the HbA1c of the 2.5 g group. Over the same period, the 5.0 g group

averaged a reduction in HbA1c of 0.05% over those from the 2.5 g group. D-tagatose appears to begin showing an effect on HbA1c within the range of doses selected for this minimum-dose study. The ongoing Phase 3 efficacy study is being conducted at a 15 g dose.

Over the course of the Dose Range study, D-tagatose also decreased the average serum triglycerides of the patients by -59 mg/dl by the end of the first month on therapy, a decrease from baseline that remained at -41 mg/dl by the end of the 6 months of the trial. D-tagatose also decreased serum LDL by an average -13 mg/dl by the end of the first month on therapy, while serum HDL was essentially unchanged (+0.9 mg/dl). The LDL:HDL ratio was improved for two of the three dose groups by an average of 0.3.

D-tagatose's safety in humans was established in 2001 when it received the designation as Generally Recognized As Safe ("GRAS") in foods by the FDA. The Phase 2 trial has provided further support that D-tagatose is safe and well tolerated, with low rates of treatment-related adverse events noted at all doses. The most common adverse events reported in the Phase 3 study and the Dose Range study were mild and gastrointestinal in nature. Previous studies have indicated that D-tagatose does not stimulate insulin secretion.

Management believes the interim Phase 3 data, combined with the fact that D-tagatose is a naturally occurring compound with no known contraindications to current Type 2 diabetes treatments, provides a strong indication of D-tagatose's potential as a treatment option for patients with Type 2 diabetes, as either a stand-alone or adjunct therapy.

In response to the interim Phase 3 results and the preliminary Dose Range preliminary results, management is actively pursuing plans to significantly increase its commercialization efforts for D-tagatose. Included in these plans is the formation of Medical Advisory Boards, as well as other commercialization efforts. The Company is also considering plans for a Pediatric Phase 2 clinical trial of D-tagatose as a treatment for diabetes to expand the potential market for the drug and extend marketing exclusivity protection six months at the end of the normal exclusivity period. Current treatment guidelines call for patients to be given metformin when diet and exercise no longer control their disease. As a result, a trial of the drug as an adjunct to metformin could also greatly expand the potential market. In addition, an effective oral treatment for Type 1 diabetes would have a large market among Type 2 diabetic patients with high insulin resistance and beta cell exhaustion. Management believes that these actions will afford the Company a better opportunity to seek and obtain an appropriate sale, license, partner, or other strategic alliance.

The Company expects to incur substantial development costs, without substantial corresponding revenue. The Company intends to finance its development activities through the remaining proceeds received from the 2007 sale of InfoSpherix, as well as additional funds it seeks to raise through the sale of additional stock.

**Results of Operations for the Three and Nine Months Ended September 30, 2009 and 2008**

**Revenue and Direct Costs**

Revenue and direct contract costs for the three and nine months ended September 30, 2009 are related to the Company's Health Sciences segment. Changes in revenue and direct costs between comparative periods reflect a combination of new contracts won and additional work on existing contracts. The effect, if any, that the current recession will have on future quarters is uncertain.

No substantial revenue from the Biospherics segment is expected until the Company is successful in selling or licensing its technology, which is unlikely to occur until the efficacy of Naturlose is further established.

**Research and Development**

The clinical trials in the use of D-tagatose for the treatment of Type 2 diabetes are the primary focus of the Biospherics segment. The R&D expenditures for 2009 and 2008 consisted of both the Phase 3 clinical trial and a related Dose Range study. The increase between years is related to the expansion of the Phase 3 trial to India and the related increase in the number of subjects participating in the trials. Currently there are 44 active sites in the U.S. and in India. A minimum of 332 participants must complete the Phase 3 trial in accord with the current protocol.

The Phase 3 trial and the Dose Range trial will likely be completed in mid- to late-2010, based on current enrollment and retention numbers, and the New Drug Application ("NDA") could be filed as early as the end of 2010. The FDA review process typically takes between one and two years to complete. Approval of an NDA application is at the discretion of the FDA.

While the Company has primarily focused its efforts on developing D-tagatose as a drug to treat Type 2 diabetes, the Company has also engaged in efforts to develop ancillary products. The Company's pipeline of compounds in preclinical research for use in conjunction with D-tagatose for the treatment of the metabolic syndrome, atherosclerosis and obesity as well as diabetes includes:

- SPX 7233801 - an antioxidant that inhibits lipid peroxidation, COX-1 and COX-2, and stimulates insulin production
- SPX 8522876 - an antioxidant that inhibits COX-1 and COX-2.
- SPX 10624258, SPX 8818309, and SPX 8818440 - anti-oxidant and anti-inflammatory compounds

In June 2009, the Company received the first batch of FDA current Good Manufacturing Practice ("cGMP") tagatose, U.S. Pharmacopeia ("USP") grade. The D-tagatose will be used to satisfy the Chemistry, Manufacturing and Control ("CMC") requirements of its NDA to the FDA. A Drug Master File ("DMF") has been submitted to FDA and Spherix has a Letter of Authorization to refer to the DMF in its NDA. This and subsequent batches will also be used in the ongoing clinical trials.

**Selling, General and Administrative**

The increase in selling, general and administrative costs for the three months ended September 30, 2009 from those of the prior period are primarily related to the expansion of the Company's commercialization efforts of D-tagatose as a treatment for Type 2 diabetes. These plans include the formation of regional Advisory Boards, beginning in October 2009.

The decrease in selling, general and administrative costs for the nine months ended September 30, 2009 from those of the prior year are primarily the result of relocating the Company's Headquarters to a smaller facility in April 2008 and lower overhead costs.

**Interest**

Interest income between years has decreased with the decrease in funds available for investing and the lower rates of return available in the market.

**Liquidity and Capital Resources, Consolidated**

During 2008 and 2009, the Company utilized the net proceeds received from the 2007 sale of InfoSpherix as the principal source of funding for its operations. As of September 30, 2009, the Company's working capital was $5.1 million, a decrease of $5.7 million from December 31, 2008. R&D and marketing activity related to the commercialization of D-tagatose accounted for approximately $4.5 million of the decrease in working capital.

The Health Sciences segment is not expected to generate any substantial excess cash flow in the next twelve (12) months.

The Company sold InfoSpherix in 2007 to generate funds to complete the Phase 3 study with the expectation that a successful study would allow the Company to attract a buyer, licensee, partner, or other strategic alliance to take Naturlose through the FDA approval process. In the course of its Phase 3 study efforts, the Company determined that it would be more likely to attract a strategic alliance partner if it also engaged in other ancillary development and commercialization activities. Thus, it embarked on the Dose Range study, engaged marketing consultants, and secured a manufacturing source for D-tagatose. As a result of favorable interim Phase 3 and Dose Range study results, the Company is further accelerating its development and commercialization efforts, which will require the expenditure of additional funds. The Company expects to expend between $8 million and $10 million over the next twelve months.

To fund its activities, the Company will seek to raise additional capital through the sale of its stock. To facilitate this effort, the Company has filed an S-3 Registration Statement with the SEC.

Continued progress on the clinical trial of D-tagatose as a treatment of Type 2 diabetes and on the other initiatives described above is dependent upon many factors including, but not limited to, the Company having sufficient funds and resources. The Company has not had, and does not expect to have, any meaningful offers to buy or license the rights to use D-tagatose as a treatment for Type 2 diabetes until the efficacy of D-tagatose has been further established.

The total cost of completing the Phase 3 trial is difficult to determine and can be affected by any number of factors including, but not limited to, the time to complete the trial. We cannot make assurances as to whether the Company will be successful in its efforts to raise the additional funds needed to complete the trial.

**Item 4T. Controls and Procedures**

*Inherent Limitations on the Effectiveness of Controls*

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

*Disclosure Controls and Procedures*

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

The Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures to provide reasonable assurance of achieving their objective pursuant to Exchange Act Rule 13a-14. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures are effective at a reasonable assurance level, as of September 30, 2009.

## Part II. Other Information

**Item 1A. Risk Factors**

In addition to the other information set forth in this report, you should carefully consider the factors discussed in Part I, "Item 1A Risk Factors" in our Form 10-K for the year ending December 31, 2008, which could materially affect our business, financial condition, and results of operations. The risks described in our Form 10-K are not the only risks facing our Company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or operating results.

**Item 6. Exhibits**

31.1 Certification of Chief Executive Officer of Spherix Incorporated pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

31.2 Certification of Chief Financial Officer of Spherix Incorporated pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

32.1 Certification of Chief Executive Officer of Spherix Incorporated pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

32.2 Certification of Chief Financial Officer of Spherix Incorporated pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

**Signatures**

Pursuant to the requirements 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: November 13, 2009

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

Date: November 13, 2009

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

**Exhibit 31.1**

# Spherix Incorporated

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

I, Claire L. Kruger, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Spherix Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a–15(f) and 15d–15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Claire L. Kruger
Claire L. Kruger
Chief Executive Officer and Chief
Operating Officer
November 13, 2009

**Exhibit 31.2**

# Spherix Incorporated

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

I, Robert L. Clayton, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Spherix Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a–15(f) and 15d–15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Robert L. Clayton
Robert L. Clayton
Chief Financial Officer and Treasurer
November 13, 2009

**Exhibit 32.1**

# Spherix Incorporated

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

I, Claire L. Kruger, Chief Executive Officer and Chief Operating Officer, of Spherix Incorporated (the "Company"), in compliance with Section 906 of the Sarbanes-Oxley Act of 2002, hereby certify that, to the best of my knowledge, the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2009 (the "Report") filed with the Securities and Exchange Commission:

- Fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Claire L. Kruger
Claire L. Kruger
Chief Executive Officer and Chief Operating Officer
November 13, 2009

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

**Exhibit 32.2**

# Spherix Incorporated

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

I, Robert L. Clayton, Chief Financial Officer and Treasurer, of Spherix Incorporated (the "Company"), in compliance with Section 906 of the Sarbanes-Oxley Act of 2002, hereby certify that, to the best of my knowledge, the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2009 (the "Report") filed with the Securities and Exchange Commission:

- Fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Robert L. Clayton
Robert L. Clayton
Chief Financial Officer and Treasurer
November 13, 2009

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