

# **Spherix's 2011 Annual Shareholder Meeting Script**

## **November 15, 2011**

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### **Robert VZ**

Good morning, ladies and gentlemen. I am Robert Vander Zanden, Chairman of the Board of Spherix Incorporated. It is my pleasure, on behalf of the Board of Directors and Officers of Spherix, to extend to you a warm welcome and to express our appreciation for those of you attending this meeting. We have already supplied each Shareholder with a copy of the Proxy Statement and the Form 10-K, and copies of these documents are available to any Shareholder who does not have one.

Today's meeting will include the Company's formal remarks regarding our achievements since our last meeting, and will provide status updates and future plans of Spherix Incorporated. The meeting will also include the election of Directors, and the vote on proposals to increase the authorized number of shares of common stock, authorization to issue securities in one or more non-public offerings, extension of the 1997 Stock Option Plan, ratification of the Independent Auditors, and authorization to adjourn this meeting if deemed necessary or appropriate. After these formal updates and voting issues have been completed, the formal portion of the

meeting will end and the informal portion of the Shareholder meeting will continue.

I would now like to take a moment to introduce the Board of Directors and Company Officers, as well as other key members of the Spherix team. As I call your name, please stand to be recognized.

First, our Directors:

1. Mr. Douglas Brown
2. Dr. Claire Kruger, CEO
3. Dr. Robert Lodder, Jr., President
4. Mr. Aris Melissaratos
5. Mr. Thomas Peter

Now I would like to introduce our Officers, key employees, general counsel, and representative from our independent auditor:

1. Mrs. Katherine Brailer, Corporate Secretary
2. Mr. Robert Clayton, Chief Financial Officer and Treasurer
3. Mr. James Baker, Corporate Counsel
4. Mr. Michael Buher, Grant Thornton LLP

Before we began the voting, I will briefly highlight our major accomplishments over the past year. As you are aware, late last year, Spherix began shifting the focus of its ongoing research and development (R&D) efforts to the use of SPX-106T (a combination of D-tagatose and one of the drug candidates we have licensed from the University of Kentucky) in lowering triglyceride and cholesterol levels. Early results are promising and an application for an Investigational New Drug for SPX-106T is being prepared for submission to the US FDA, and a human proof-of-concept trial is expected to begin in 2012.

Since our last meeting, Spherix management has taken important steps to broaden our product pipeline by exploring the possibility of obtaining by license or acquisition other clinical stage compounds and/or orphan drugs for continued development and commercialization. This strategy is focusing on markets with large patient populations with unmet needs and other opportunities with attractive pricing and market exclusivity.

The Board is confident of the direction that management is taking, has faith in the people it has brought on board to realize our goals, and looks forward to an exciting, challenging and successful 2012.

We will now commence with the voting portion of today's meeting.

**Robert VZ**

Mrs. Brailer, has the Notice of this Meeting been sent to all Shareholders entitled to vote at this meeting?

**Kathy**

Yes.

**Robert VZ**

Thank you. Mrs. Brailer has also been appointed Inspector of Election. Will you please present your report of attendance at this Meeting so that we can determine whether a quorum is present?

**Kathy**

There were approximately 2.5 million shares entitled to vote as of the September 16, 2011 Record Date. There are 1.9 million shares, or 76% of the shares present by Proxy.

**Robert VZ**

Thank you. On the basis of the report of the Secretary and the Inspector of Election, I find that proper Notice has been given and that a quorum is present; accordingly, this Meeting has been properly convened. The polls for voting on all matters are hereby opened.

**Robert VZ**

Each matter to be acted on at this Meeting will be discussed separately. At the conclusion of the discussion of all items, voting will take place for those requesting ballots. We will then tally and report the votes.

Mrs. Brailer, were there any Shareholder nominations or proposals for business at this meeting properly filed with you as Secretary?

**Kathy**

No.

**Robert VZ**

Since no Shareholder nominations or proposals were properly filed in advance of this Meeting, the business of this Meeting is limited to the six matters on the Agenda.

The first proposal we will consider is the election of six Directors to serve until new Directors are elected at the next Annual Meeting. Information concerning their principal occupations, their service with Spherix Incorporated, and other matters which may be of interest are contained in the Proxy Statement. No additional nominations may be made at this Meeting, so, therefore, I declare nominations to be closed. Is there any discussion with respect to the nominations for Director?

**Robert VZ**

The second item of business we will consider is the proposal to approve an amendment to the Company's Certificate of Incorporation to increase the authorized number of shares of Common Stock, as described in detail in the Proxy Statement.

Is there any discussion with respect to this proposal?

**Robert VZ**

The third item of business we will consider is the authorization to issue securities in one or more non-public offerings.

Is there any discussion with respect to this proposal?

The fourth item of business we will consider is the extension of the 1997 Stock Option Plan.

Is there any discussion with respect to this proposal?

The fifth item of business we will consider is the ratification of the appointment of the independent accountants. Mr. Michael Buher is here to represent Grant Thornton and is available to answer appropriate questions.

Is there any discussion with respect to this proposal?

The sixth and final item of business we will consider is the authorization to adjourn the Annual Meeting if necessary or appropriate.

It has been determined that it is not necessary or appropriate to adjourn or postpone today's meeting and we will be proceeding with all voting items.

**Robert VZ**

I believe that concludes discussion on all matters. We will now proceed with the voting. Most of you have already voted and there is no need for you to recast your vote. If you have not voted yet, please raise your hand so that a ballot may be given to you.

**[SHORT BREAK TO HANDOUT BALLOTS IF NEEDED]**

**Robert VZ**

Will the Shareholders who just received ballots please mark their ballots and return them to Mrs. Brailer who will now tally the final votes.

**[SHORT BREAK TO TALLY VOTES IF NEEDED]**

## **Robert VZ**

Mrs. Brailer, please proceed with your report on the vote.

## **Kathy**

"Each Director Nominee has received the necessary plurality of votes required."

"A majority of the outstanding shares has voted FOR the proposal to approve an amendment to the Company's Certificate of Incorporation to increase the authorized number of shares of Common Stock."

"A majority of the votes cast has voted FOR the authorization to issue securities in one or more non-public offerings."

"A majority of the votes cast has voted FOR the proposal to extend the 1997 Stock Option Plan."

"A majority of the votes cast has voted FOR ratification of Grant Thornton LLP as the Company's independent certified public accountants for fiscal year 2011."

## Robert VZ

Thank you. The report of the Inspector of Election as presented is accepted. The Director Nominees have been duly elected and management is authorized to proceed with the amendment to the Company's Certificate of Incorporation to increase the authorized number of shares of Common Stock. In addition, management now has the authorization to issue securities in one or more non-public offerings, the 1997 Stock Option Plan has been extended through December 31, 2015, and Grant Thornton LLP has been appointed Spherix's independent certified public accountant for fiscal year 2011.

I want to thank all of you for attending today's Shareholder's Meeting and for the interest you have shown in the affairs of your Company.

I will now ask for a motion to adjourn the formal meeting.

**[MOTION MADE]** Thank you, do I have a second? **[SECOND MADE]** Thank you. All in favor please say "Aye". All opposed please say "Nay". Motion carried. This Meeting is hereby adjourned to our Informal Meeting.

Now, it is my pleasure to introduce to you, Dr. Claire Kruger, Chief Executive Officer, who will begin the Company's formal comments and tell you more about what has happened since we last met.

## Claire

**Thank you Dr. Vander Zanden, and my thanks to all of you for joining us. I am happy to report that over the course of the past year, Spherix has taken important steps to increase our shareholder value by successfully executing and delivering on key milestones in the development of our combination drug SPX-106T for dyslipidemia. These steps broaden and diversify our product pipeline with a focus on markets that include both large patient populations with unmet need, such as high triglycerides and other metabolic syndrome disorders, and orphan drug opportunities with attractive pricing and market exclusivity. Additionally, we have been actively pursuing an in-licensing strategy to accomplish our goal of adding key targeted assets to our portfolio that increase the robustness and value of our pipeline.**

**Since our 2010 annual meeting held last August, the team at Spherix has achieved a number of successes. Last August we were all anxiously awaiting the conclusion of our Phase 3 trial with D-tagatose in mild type-2 diabetics. When the results were unblinded in that double-blind placebo-controlled trial, we were very pleased that D-tagatose showed a statistically significant reduction in HbA1c levels in patients with Type 2 diabetes. The reduction was 0.4% in the intent-to-treat global population at 10 months, and 1.1% in the U.S. per-protocol population at 10**

**months. We believe these results reflect differences not only in patient compliance between the two groups, but also differences in adiposity, as reflected in this study by body mass index, or BMI.**

**You might recall that we began this trial in 2006, but in 2008 the U.S. Food and Drug Administration issued additional guidelines for diabetes drug development that made the cost to continue development of the drug prohibitive. That said, we believe that D-tagatose has the safety and efficacy qualities to support continued development in diabetes, and we continue to have discussions with potential partners who could fund the additional studies required by the FDA.**

**But importantly, this management team and our in-house scientific staff brought in through our consulting subsidiary have shown that we can move a drug through clinical trials to a successful conclusion, and our plans call for drawing on this experience to develop additional drugs.**

**To that end, we have been actively engaged in pursuing an in-licensing strategy to bolster and diversify our product pipeline. As you are aware, we have in-licensed several preclinical cardiovascular and metabolic drug candidates from the University of Kentucky, and we are testing them alone and in**

**combination with D-tagatose. The results of our animal studies have been very encouraging.**

**One of these compounds is SPX-106. When administered to genetically engineered mice prone to dyslipidemia, this compound achieved statistically significant reductions in triglycerides and cholesterol in combination with D-tagatose for nine weeks. Both SPX-106 and D-tagatose alone are able to lower triglycerides and lower cholesterol, but the combination, which we are calling SPX-106T, is proving to be extremely powerful. We reported results from mouse studies this past June and September, and then followed up these announcements with news that SPX-106T reduced dyslipidemia in new studies of apolipoprotein E-deficient mice and Syrian Golden hamsters, which also corroborated data obtained in LDL receptor-deficient mice. Additionally, a new study in rats demonstrated that D-tagatose inhibits fructose absorption in the gastrointestinal tract, and this finding provides further insight into the mechanism of action of SPX-106T.**

**We are now performing studies designed specifically to test therapy in diet-induced lipidemia, using dosing and timing information derived from the studies in LDL receptor-deficient mice. In layman's terms, what we have found is that we are able to lower triglycerides and lower cholesterol in mice and**

**hamsters that have been fed a diet that corresponds to the human western diet.**

**We hope to begin testing SPX-106T in humans in the spring, and plan to file an Investigational New Drug, or IND application with the FDA around the end of the first quarter of 2012.**

**As we have mentioned publicly in the past, compared with diabetes the development pathway for drugs that lower triglycerides and cholesterol has lower hurdles in terms of study requirements for approval, and thus lower development costs. Importantly, the market for triglyceride-lowering and cholesterol-lowering drugs is a large and under-served market, with an estimated worldwide treatment market of \$26 billion annually. In the U.S. the opportunity exceeds \$3 billion annually, as fully one-third of Americans are overweight or obese. Clearly, if we can develop a drug to provide safe and efficacious treatment, the rewards for Spherix and its shareholders will be profound.**

**We are also currently evaluating numerous additional opportunities, including those in the orphan drug space, as exciting and achievable targets. Orphan drugs are defined as those addressing a treatment population of 200,000 patients or less.**

**We are investigating opportunities to in-license drug candidates currently in Phase 1 or Phase 2. Our aim is to identify the opportunities best suited to our business goals based on financial considerations, achievable clinical milestones and development potential, with the goal of enhancing shareholder value.**

**In particular, our attention to the orphan drug market is important because the benefits of orphan drugs for the developer and marketer are numerous. First, the pathway to approval tends to be shorter, because by definition these patients have unmet medical needs and the regulatory authorities are anxious to provide solutions. Orphan drugs are granted seven years of additional market exclusivity to encourage their development. In addition, these drugs typically may be marketed by fewer sales representatives, and often prices for the drugs are set at a premium.**

**We have engaged a financial advisor who is charged with identifying drug candidates, including orphan drug candidates, in clinical development that may be available to us. I hope that by the time I address you at next year's annual shareholders' meeting, we will have begun work on one or more orphan drugs. I will now turn the meeting over to Dr. Lodder.**

**Robert Lodder**

**Thanks Claire. The short remaining patent life on use of D-tagatose to treat diabetes, which expires in 2012, combined with the high cost of additional trials mandated by FDA in their new guidance for oral antidiabetic medications, complicate pursuing D-tagatose as a prescription medication for treatment of Type 2 diabetes. SPX-106T enjoys a much longer patent life, approximately 18 years remaining, plus Hatch-Waxman data exclusivity, plus 7 years for any orphan indications that are currently being explored.**

**In the study Dr. Kruger cited, SPX-106T treatment of LDL receptor-deficient animals on a sugar-supplemented diet with twice-daily oral dosing significantly reduced triglycerides, far more effectively than D-tagatose alone [by 36%, or 43 mg/dl compared with control animals with a mean triglyceride level of 118 mg/dl (p=0.01)]. The same therapy significantly reduced total cholesterol by 19% [73 mg/dl from a mean level of 378 mg/dl compared with control animals (p=0.01) ].**

**In contrast to the effect of some fish oils, SPX-106T reduced VLDL along with triglycerides. There was a reduction in VLDL by 35% (from 127 mg/dl to 82 mg/dl) and LDL by 18% (from 141 to 116 mg/dl). Importantly, the same therapy also reduced**

**atherosclerotic lesion area in the aortic arch to less than one-half the value of the untreated group.**

**The original study in LDL receptor-deficient mice on a sugar-supplemented diet was actually designed to test the effect of D-tagatose on triglycerides, and SPX-106 was added to one treatment arm just to see if it had any effect. After the results in LDL receptor-deficient mice became known, the second study in the apoE receptor-deficient mice was designed deliberately to test SPX-106T.**

**In this apoE study, in mice fed a Western (high fat/high carbohydrate) diet, SPX-106T significantly reduced serum cholesterol by 30% (-307 mg/dl;  $p < 0.05$ ), which is more than one and one-half times greater than the effect observed in the study in LDL receptor deficient mice. SPX-106T also prevented body weight gain ( $p < 0.05$ ), and significantly reduced the amount of subcutaneous, retroperitoneal, and epididymal fat (77, 90, 85% reductions, respectively,  $p < 0.01$ ). The study in apoE mice is ongoing and results for triglycerides and atherosclerosis should be available soon. Given the improvement in cholesterol, we are cautiously optimistic about the future study results.**

**Follow-on molecules to SPX-106 and 106T are in development. Progress is being made on some new orphan candidates and novel molecules, for which we will be seeking composition of matter protection. With that, I will turn the meeting back over to Dr. Kruger.**

**Claire**

**Thank you again for your attendance. We will now open the floor to questions from our shareholders.**