

**Life Tech Florida
Meeting Minutes
December 16, 2011, 11:00 AM
Conference Call**

Attendees: Andrew Duffell, Divina Grossman, Todd Holt, Linda Howdyshell, Gary S. Margules, Ed Massey, Rolando Montoya, Frank Nero, Roy Pocknee, Marcelo Radice, Mark Rosenberg, Shawn Rowan, Mary Jane Saunders, Robert Swindell

Absent: David Armstrong, Ivan Baines, Dennis Gallon, Jonathan Lord, Elvis Rojas

Meeting commenced at 11:00 a.m. on December 16, 2011.

I. Welcome

Dr. Rosenberg and Dr. Grossman welcomed everyone.

II. Industry Report --- Bioheart Inc.

Dr. Grossman introduced the first industry report, a presentation by a Life Sciences company in South Florida designed to educate and inform about innovative advances and business models. President Rosenberg then introduced Mr. Mike Tomas, President and Chief Executive Officer of Bioheart. Mr. Tomas is an FIU alumni and currently the Chairman of the Advisory Board of the Pino Global Entrepreneurship Center at FIU. Established in Sunrise, FL, 10 years ago, Bioheart is a stem cell company that focuses on heart failure patients. The company has raised and invested over \$103 million in trials and investigations of adult stem cells; Bioheart does not work with embryonic stem cells as this may be negatively perceived by certain religious or political groups. The Bioheart team has demonstrated the efficiency and effectiveness of adult stem cells through research.

Bioheart focuses on heart failure, specifically focusing on patients with diminished ejection fraction; attempting to build capacity and increase ejection fraction or at least curb the negative effects of continued diminished capacity. Mr. Tomas described how normally, with each pump, 65% of the blood is pumped from the heart to the rest of the body; a percentage he referred to as left ventricle ejection fraction (LVEF). In instances of heart failure, heart tissue will die and not regenerate like other parts of the body decreasing ejection fraction. If the ejection fraction goes below 55%, patients may grow winded from simply walking around the house. If a patient's ejection fraction fell below 45%, the condition is so debilitating that no drug in the world exists that can regulate the ejection fraction to normal. Eventually a patient with this condition will require a heart transplant. Mr. Tomas expressed the need for other innovative alternative solutions to heart transplant for patients with heart failure as there are not enough donors to support the demand.

In Bioheart's process, Mr. Tomas noted that stem cells are removed from the body, specifically from thigh muscle tissue rather than bone marrow, which is less invasive and painful to the patient. These stem cells are extracted, cultured, and extended before being re-injected into the patient's body, a process called autologous cell transplant. Autologous cells are taken from an individual, stored and genetically manipulated before being transferred back into the individual. Mr. Tomas described how his team has a pending patent for their own catheter for injection of the autologous cells. The team has

discovered that new striations of muscle can grow in the scar tissue of the heart left post heart failure, increasing ejection fraction by an average of 20% in 90 days and building a bridge to recovery. Mr. Tomas explained they have successfully demonstrated phase I and II of recovery, safety and efficacy; they are now in phase II and III, allocating the resources to finalize all trials. To finalize all trials it will take \$10 to \$12 million and once completed the company can apply for approval by the U.S. Food and Drug Administration (FDA) and commercialize. Mr. Tomas noted that Bioheart became a public company three years ago, citing the unintended consequence of making private investments more challenging to obtain.

Mr. Tomas explained patients are being treated in 11 different countries, including in the Czech Republic. He further explained how trials in the Czech Republic resulted in saving the limbs of nine patients. Mr. Tomas indicated that even though the company specializes on heart failure, the team's stem cell research can be used and applied to other procedures. He explained that patients whose wounds do not heal or have no blood flow are at risk of losing limbs. An injection of cells directly into the scar tissue and regeneration of the tissue will close and heal a wound.

Mr. Tomas also described how the research and discoveries from pre-clinical trials with small and large animals have assisted in developing Stem Logix, a company based in Weston, FL and led by Kristin Comella, Chief Science Officer at Bioheart. Stem Logix is a company that uses stem cell research to treat arthritic dogs and wounded racehorses. In addition, he explained the launch of a third company, Ageless Regenerative Institute, using adult stem cells for anti-aging and cosmetic procedures. Mr. Tomas emphasized the need to re-engage in stem cell trials and to seek approval and commercialization by the FDA in the next two years. A new phase I study trial has been approved by the FDA and will be conducted in Miami by Dr. Joshua M. Hare, Director of the Interdisciplinary Stem Cell Institute (ISCI) at the University of Miami Miller School of Medicine.

Dr. Grossman indicated that one of the group's goals is continued professional development through regional webinars for members. Dr. Grossman will contact Mr. Tomas to present in a regional webinar. Mr. Tomas agreed to the invitation and stated he will invite Bioheart's Chief Science Officer Kirstin Comella.

Mr. Nero asked if the findings of the company had been widely reported and if Bioheart wanted that level of profile at this juncture in time. Mr. Tomas noted that Bioheart is well known, with a consistent strong presence at industry and topically based conferences. However, Mr. Tomas felt that subject matter experts are more aware of their work than the consumers at large. Bioheart would certainly welcome any additional publicity.

In response to a question posed by Mr. Swindell regarding research with myoblast cells, Mr. Tomas stated the company does work with myoblast cells; he added that there are 50 to 500 times more efficient myoblast cells in adipose (fat) tissue than bone marrow.

Dr. Pocknee asked about the skill sets graduates needed to work for a company like Bioheart. While many competencies are needed, Mr. Tomas noted that scientists that understand how to write business plans would demonstrate the set of interdisciplinary skills needed for maximum success. He will visit his team to discuss the range of skills required and will report to the group.

III. New Business --- BioFlorida Conference

Dr. Grossman introduced Dr. Libby Handel, Director of Biotechnology and the Banner Center at Palm Beach State College, who currently serves as the Program Chair for the 15th Annual BioFlorida Conference scheduled to be held in Miami, October 7-9, 2012. Dr. Grossman directed all call attendees to the link provided from the 2011 BioFlorida Conference to view the program scope and content. Dr. Handel explained that last year's conference, held in Orlando, FL had over 600 attendees and 20 public officials in attendance – the largest conference to date indicative of larger trends and increased focus in this area. She explained the tentative theme for the 2012 Conference is “Innovation, Efficiency and Globalization”, identified as the three market drivers in today's economy. She further explained the conference runs for two days and that there are three tracks in the conference - Biobusiness, Investment, and Science. Dr. Handel stated she is seeking to highlight innovative programming in the Miami area and suggested that one way to engage scholars is by identifying people with exciting advancements to present. In addition to presenters, Dr. Handel is looking for sponsorship, exhibitors, keynote speakers, and individuals to serve on committees. She expressed her desire to have our region shine and asked the team to send suggestions for key people from research institutions to be involved and identify the appropriate capacity for involvement. She provided the group with a deadline of January 12, 2012, to submit any recommendations. Dr. Handel will have the tentative theme finalized by the second week of January and will forward the information to the group when it is confirmed.

Dr. Margules suggested Life Tech Florida have a presence at the 15th Annual BioFlorida Conference through a display, exhibit or other showcase. He mentioned it may be a great opportunity for the team to share the purpose and advancement of this initiative with the State. Dr. Grossman will coordinate the presence of Life Tech Florida at the 15th annual BioFlorida Conference.

Dr. Radice informed the team of the 8th Annual World Stem Cell Summit scheduled for December 3-5, 2012 in West Palm Beach, FL. He is looking for individuals interested in sponsorship; he explained there will be a 10% discount on sponsorship renewal for early commitment. Payments will be due March 31, 2012. Dr. Radice will forward sponsorship information to the group.

IV. Review of Meeting Minutes

The minutes of the Executive Committee Conference Call on October 19, 2011 were reviewed and approved.

V. Old Business

Dr. Grossman explained that Mr. Nero researched and discovered a few trademarks whose name consists of “Life Tech” ranging from cement grout to agricultural products to jockey underwear. FIU's General Counsel, Kristina Raatama, learned there are two companies aggressively pursuing trademark infringements on the “Life Tech” name and recommended moving in a different direction with the name. As a result, Terry Witherell, FIU Vice President of External Relations, recommended the following name: **Life Sciences Florida** with the tagline **Research. Talent. Development.** The new logo was disseminated to the group and conversation ensued to critique and finalize the name. President Saunders suggested including the word “technology” in the tagline, feeling its exclusion would limit the scope of the group's work. There was some question regarding whether the name should narrow the focus to South Florida. Mr. Nero explained that emphasizing South Florida may be more descriptive. After listening to the team's feedback, everyone unanimously agreed to **Life Sciences South Florida** with the tagline **Technology. Talent. Research.**

Dr. Grossman mentioned that the asset map data will be sent for final review for accuracy before the launch of the Life Sciences South Florida website, scheduled for early spring. Dr. Grossman noted missing data from one member institution, to be included upon receipt. She also noted the December 21, 2011 conference call with Dr. Baines to discuss the development of a shared technology platform and communication portal. Over time, the asset map data provided on the central Life Sciences South Florida website will be at the foundation of a proposed geographically-oriented, engaging user interface included in the shared platform/portal.

VI. Florida ExpertNet

Dr. Radice, Executive Director of the University of Miami's Innovation and Life Sciences and Technology Park, introduced Florida ExpertNet (www.expertnet.org) to the group. He explained it is a statewide portal of research expertise in universities across Florida. The portal provides information on centers/institutes, funded research projects, and technology licensing opportunities. He suggested viewing this as a possible future model for this initiative. In response to Dr. Grossman's question about who inputs data to the database and how often the information gets updated, Dr. Radice stated he will research and inform the team by the December 21, 2011 conference call.

Heather Belmont announced that FIU, in partnership with Miami Dade College, Saint Thomas University and Interamerican University of Puerto Rico, received a \$3.2 million grant from the United States Department of Agriculture (USDA). The grant will increase Hispanic diversity in USDA workforce and bolster agri-science education at FIU and throughout South Florida and the Caribbean.

Dr. Rosenberg noted the positive progression of the initiative, thanked everyone for their participation, and wished everyone a happy holiday season.

VII. Adjournment

President Rosenberg adjourned the meeting at 11:55 a.m.

Action Items

1. Dr. Grossman will send out the asset map data for final review before the website launch.
2. Dr. Radice will explore ExpertNet's procedure for data entry and ensure data integrity.
3. Dr. Radice will forward sponsorship information for the 8th Annual World Stem Cell Summit to executive committee members.
4. Dr. Handel will forward the finalized BioFlorida 2012 Conference theme to the group when available.
5. Dr. Grossman will contact Mr. Tomas for the creation of a regional webinar for LSSF members.
6. Dr. Grossman will coordinate the presence of Life Sciences South Florida (LSSF) at the 15th Annual BioFlorida Conference in Miami, FL on October 7-9, 2012.