



OSIRIS THERAPEUTICS, INC.

Osiris Reaches Safety Milestone in Stem Cell Clinical Trial for Cardiac Patients

Baltimore, MD, November 04, 2005 - Osiris Therapeutics, Inc. announced today that its multi-center, human clinical stem cell trial for the treatment of patients suffering from heart attacks has successfully passed the first safety milestone of the trial. Additionally, the novel stem cell therapy was cleared by the presiding independent safety board to begin enrolling patients at higher doses of drug. Osiris is developing Provacel™ as part of a comprehensive strategic alliance with Boston Scientific Corporation (NYSE: BSX) for development and commercialization of Osiris' mesenchymal stem cell technology in the cardiac field.

"Each step brings us closer to providing a novel stem cell therapy to treat heart attack patients who are in need," said Cardiologist Nabil Dib, M.D., Chief of Cardiovascular Research at the Arizona Heart Institute. Dr. Dib is one of the investigators evaluating the stem cell drug in patients who have recently had their first heart attack. "Congestive heart failure is a common outcome in heart attack patients and is the number one cause of disability in the United States".

Enrollment in this Phase I study began in March. The trial is being conducted in accordance with U.S. Food and Drug Administration guidelines, and is designed to evaluate safety and investigate the therapeutic benefits of treatment with stem cells obtained from healthy unrelated adult donors. In accordance with the design of the trial, an independent monitoring board evaluated the safety data from the first group of patients treated with the drug as compared to those receiving placebo. Based upon predetermined criteria for the severity and number of treatment related adverse events, the board unanimously recommended that the study proceed and that a higher dose be evaluated. The Data Safety Monitoring Board is made up of independent physicians, a statistician, an ethicist and a clinical trial specialist.

"Our commitment in this new frontier of stem cell therapy is first and foremost patient safety," said C. Randal Mills, Ph.D., President and CEO of Osiris Therapeutics. "This is significant for all of our clinical programs since our stem cells products represent a true platform technology."

"We are very pleased that Osiris has reached this important safety milestone," said Dr. Jim Barry, Boston Scientific Vice President for Corporate Research and Advanced Technology Development. "This successful step reinforces our excitement about the potential of Osiris' stem cell therapy to provide a new and revolutionary treatment option for heart attack patients."

Provacel is a formulation of adult stem cells designed to repair damaged tissue. A unique benefit of the product is that it is given to patients through a standard IV line. The delivered cells are expected to respond to the body's own signals and migrate to the area of injury.

In addition to the cardiac clinical trial, Osiris is currently enrolling patients in three other stem cell studies. The company has two ongoing Phase II clinical trials with Prochymal™ to treat graft versus host disease, a life threatening disease affecting leukemia patients and others who have received bone marrow transplants. Osiris also has an ongoing Phase I/II clinical trial with Chondrogen™ for the treatment of meniscal injuries in the knee.

Osiris Therapeutics, Inc. is the leader in adult stem cell therapy. The stem cells produced by Osiris are obtained from adult volunteer donors, avoiding the technical problems and controversy surrounding other stem cell technologies. Using proprietary methods, these cells are grown in culture to very high numbers, allowing a single donor's cells to treat thousands of patients. These cells can be used in patients unrelated to the donor, without rejection, eliminating the need for donor matching and recipient immune suppression. Once transplanted, the cells promote healing of damaged or diseased tissues. The Company's current focus includes the use of adult stem cells to improve outcomes in bone marrow recipients being treated for leukemia, to repair damage following a heart attack or congestive heart failure, and to prevent and treat arthritis.

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