



Osiris Announces Top-Line Interim Results for Stem Cell Trial for Knee Repair

Baltimore, MD - February 12, 2007 - Osiris Therapeutics, Inc. (NASDAQ: OSIR) announced six-month interim results in its evaluation of CHONDROGEN™ for the regeneration of meniscus in the knee. A total of 55 patients were treated in the Phase I/II, double-blind study evaluating the safety and exploratory effectiveness of CHONDROGEN, a preparation of adult stem cells formulated for direct injection into the knee. At the six month time point, CHONDROGEN met its primary endpoint, demonstrating product safety. The trial did not demonstrate that CHONDROGEN resulted in a statistically significant increase in the volume of meniscus as compared to placebo; however, an improvement in baseline cartilage and joint condition was noted in patients treated with the stem cell drug that was not seen in patients that received placebo. An interim review of the data will be presented by C. Thomas Vangsness Jr., M.D. at the Stem Cell Summit in San Diego on February 13, 2007.

The study was designed to assess the safety of an injection of stem cells into the joint capsule and to gain preliminary efficacy data on the extent of tissue regeneration using magnetic resonance imaging or MRI. Patients in the study underwent standard meniscectomy surgery to remove torn or damaged tissue in their meniscus. One week following surgery, the patients were given a single injection of either placebo, or a low dose (50 million cells) or high dose (150 million cells) of CHONDROGEN. Neither the patients nor the surgeons will know what was given for the duration of the study. Patients will be followed for safety and additional preliminary efficacy, such as pain, cartilage damage, and changes in the meniscus for two years under the current study protocol.

An initial review of the data showed that CHONDROGEN was well tolerated, was not associated with serious adverse events, did not result in any adverse hematological events, and did not result in the formation of any unwanted or ectopic tissue. There was no significant change in the volume of meniscus on MRI at 6 months in patients that received CHONDROGEN compared to those patients receiving placebo. However, about 30% of patients treated with CHONDROGEN demonstrated an improvement in their baseline cartilage or joint condition, while no patients in the placebo group demonstrated similar improvement.

"Although we are very pleased to see that our stem cells continue to be well tolerated, we are obviously disappointed that we were unable to detect significant amounts of meniscal regeneration," said C. Randal Mills, Ph.D., President and CEO of Osiris Therapeutics. "Presently, we are working to complete our review and fully evaluate the entirety of the data we have received. Moving forward, we await the cartilage data from the one year time point and will investigate further the improvements observed in the pre-existing cartilage damage."

Osiris will host a conference call to discuss the preliminary results on Tuesday February 13, 2007 at 8:00 a.m. EST. To access the live webcast, please log on to the Investor Relations section of the company's website at <http://investor.osiris.com/events.cfm>. Alternatively, callers may participate in the conference call by dialing 877-502-9274 (U.S. participants) or 913-981-5584 (international participants).

The CHONDROGEN trial is one of four different clinical trials Osiris currently has active in the U.S. The company has an ongoing Phase III trial evaluating PROCHYMAL for Graft vs. Host Disease, a life threatening complication of bone marrow transplantation, has just initiated a Phase III trial evaluating PROCHYMAL for Crohn's Disease, and has a Phase I trial evaluating PROVACEL for the repair of heart tissue following a heart attack.

"We appreciate the hard work of the investigators and coordinators at our clinical sites and we look forward to continuing to work together to complete a high quality study," said Michelle LeRoux Williams, Ph.D., Program Director for Chondrogen. "Understanding the potential benefits that these cells can have in treating existing arthritis will be an area of intense focus for the CHONDROGEN team."

About Osiris Therapeutics



Osiris Therapeutics, Inc. is a leading stem cell therapeutic company focused on developing and marketing products to treat medical conditions in the inflammatory, orthopedic and cardiovascular areas. Osiris currently markets and sells Osteocel[®] for regenerating bone in orthopedic indications. Prochymal[™] is in Phase III clinical trials and is the only stem cell therapeutic currently designated by FDA as both an Orphan Drug and Fast Track product. The Company's pipeline of internally developed biologic drug candidates under evaluation also includes Chondrogen[™] for regenerating cartilage in the knee, and Provacel[™], for repairing heart tissue following a heart attack. Osiris is a fully integrated company, having developed stem cell capabilities in research and development, manufacturing, marketing and distribution. Osiris has developed an extensive intellectual property portfolio to protect the company's technology in the United States and a number of foreign countries including 47 U.S. and 167 foreign patents owned or licensed. More information can be found on the company's website, www.Osiris.com. (OSIR-G)

Forward-Looking Statements

This press release contains forward-looking statements. Forward-looking statements provide our current expectations or forecasts of future events. Forward-looking statements include statements about our expectations, beliefs, plans, objectives, intentions, assumptions and other statements that are not historical facts. Words or phrases such as "anticipate," "believe," "continue," "ongoing," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project" or similar words or phrases, or the negatives of those words or phrases, may identify forward-looking statements, but the absence of these words does not necessarily mean that a statement is not forward-looking. Examples of forward-looking statements include, but are not limited to, statements regarding the following: our product development efforts; our clinical trials and anticipated regulatory requirements; the success of our product candidates in development; status of the regulatory process for our biologic drug candidates; implementation of our corporate strategy; our financial performance; our product research and development activities and projected expenditures, including our anticipated timeline and clinical strategy for MSCs and biologic drug candidates; our cash needs; patents and proprietary rights; ability of our potential products to treat disease; our plans for sales and marketing; our plans regarding our facilities; types of regulatory frameworks we expect will be applicable to our potential products; and results of our scientific research. Forward-looking statements are subject to known and unknown risks and uncertainties and are based on potentially inaccurate assumptions that could cause actual results to differ materially from those expected or implied by the forward-looking statements. Our actual results could differ materially from those anticipated in forward-looking statements for many reasons, including the factors described in the section entitled "Risk Factors" in our Registration Statement on Form S-1, File No: 333-134037, as filed with the United States Securities and Exchange Commission and declared effective on August 3, 2006. Accordingly, you should not unduly rely on these forward-looking statements. We undertake no obligation to publicly revise any forward-looking statement to reflect circumstances or events after the date of this press release or to reflect the occurrence of unanticipated events.

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