



Osiris Therapeutics to Receive Milestone Payment from JCR Pharmaceuticals

Clinical Trial Using Prochymal to Treat Life Threatening GvHD to Start in Japan

COLUMBIA, Maryland – January 7, 2008 – Osiris Therapeutics, Inc. (NASDAQ: OSIR), a leading stem cell therapeutic company, announced today that it will receive a \$500,000 milestone payment under its collaboration agreement with JCR Pharmaceuticals. The milestone payment was triggered when JCR Pharmaceuticals filed a Clinical Trial Notice to the Pharmaceuticals and Medical Devices Agency in Japan to initiate a clinical trial in patients with Graft vs. Host Disease (GvHD).

"GvHD is a devastating condition that afflicts bone marrow transplant recipients worldwide. We are very pleased that through our combined efforts, we have been able to advance this important program in Japan," said C. Randal Mills, Ph.D., President and Chief Executive Officer of Osiris Therapeutics. "Our collaboration with JCR Pharmaceuticals is representative of Osiris' commitment to make our life saving products available to patients around the world."

The milestone payment arises from a drug discovery alliance with JCR Pharmaceuticals focusing on the commercialization of Prochymal in Japan for the treatment of patients with GvHD. Under the terms of the collaboration, JCR will bear all costs associated with bringing the drug to market in Japan. Osiris Therapeutics is eligible to receive additional milestone payments of up to \$6.5 million, as well as sales milestones and significant royalty payments on sales of the drug in Japan.

Prochymal is a highly purified formulation of mesenchymal stem cells (MSCs) that are grown in culture, permitting large-scale production. MSCs are able to down-regulate severe inflammation and work at the cellular level to rebuild damaged tissue through the coordinated release of tissue specific growth factors. In a Phase II trial for acute GvHD, the administration of Prochymal resulted in a 77% complete remission rate.

Prochymal is currently in Phase III clinical trials for the treatment of Graft vs. Host Disease and Crohn's Disease and a Phase II trial for type 1 diabetes. Prochymal has also demonstrated preliminary efficacy in the treatment of patients experiencing heart attacks. Prochymal has established a strong safety profile in seven previous Phase I and II trials.

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 being evaluated in Phase III clinical trials for three indications, including acute and steroid refractory Graft versus Host Disease and also Crohn's disease, and is the only stem cell therapeutic currently designated by FDA as both an Orphan Drug and Fast Track product. Osiris has also partnered with Genzyme Corporation to develop Prochymal™ as a medical countermeasure to nuclear terrorism and other radiological emergencies. Prochymal is also being developed for the repair of heart tissue following a heart attack and for the protection of pancreatic islet cells in patients with type 1 diabetes. The Company's pipeline of internally developed biologic drug candidates under evaluation also includes Chondrogen™ for arthritis in the knee. Osiris is a fully integrated company, having developed capabilities in research, development, manufacturing, marketing and distribution of stem cell products. 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 215 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 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 mesenchymal stem cells 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 Annual Report on Form 10-K filed with the United States Securities and Exchange Commission. 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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