



Major Shareholders of Osiris Therapeutics Elect to Extend Lock-up Agreement

Osiris Therapeutics to Present at the 2007 UBS Global Life Sciences Conference

Columbia, Maryland – September 20, 2007 – Osiris Therapeutics, Inc. (NASDAQ:OSIR), a leading stem cell therapeutic company focused on developing and marketing products to treat medical conditions in the inflammatory, orthopedic, and cardiovascular areas, announced today that Peter Friedli, Chairman of the Board of Directors of Osiris, and certain entities with which he is affiliated, entered into an Amendment to the Lock-up Agreement with Osiris originally commencing on October 30, 2006. Pursuant to the Amended Lock-up Agreement, the parties have agreed not to transfer Company securities held by them without approval of the Company until January 30, 2009, rather than and in lieu of January 30, 2008, as provided in the Original Lock-Up Agreement. The extended lock-up agreement covers 12.9 million shares of Osiris common stock, and warrants and shares issuable if and when convertible promissory notes are converted into common stock for an additional 1.5 million shares of common stock.

"With two indications in Phase III and a full pipeline following close behind, Osiris represents an exciting opportunity in an emerging new therapeutic area," said Peter Friedli, Chairman of the Board of Directors of Osiris. "The decision to extend the lock-up period is a direct reflection of my confidence in the technology, management, and the long-term growth prospects of the company."

Also, C. Randal Mills, Ph.D., President and CEO, is scheduled to present at the 2007 UBS Global Life Sciences Conference on Tuesday, September 25, 2007 at 9:00 am EDT. A live audio webcast of the presentation may be accessed through the Investors page of the Company's website at www.Osiris.com. An audio replay of the webcast will be available for 30 days following the conference.

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 for both Graft versus Host Disease and 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. The Company's pipeline of internally developed biologic drug candidates under evaluation also includes Chondrogen[™] for arthritis in the knee, and Provacel[™], for repairing heart tissue following a heart attack. 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 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 may contain forward-looking statements. These forward-looking statements may generally be identified by the use of the words "may," "will," "expects," "anticipates," "believes," "estimates," and similar expressions, and involve a number of risks and uncertainties. For a variety of reasons, actual results may differ materially from those described in or contemplated by any such forward-looking statement. Consequently, the reader is cautioned to consider all forward-looking statements in light of the risks to which they are subject.

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