



Osiris and NuVasive Enter into Definitive Agreement for Osteocel®

Transaction provides substantial infusion of cash as Osiris prepares for commercial launch of Prochymal™

Columbia, Maryland - May 8, 2008 – Osiris Therapeutics, Inc. (NASDAQ:OSIR) today announced that it has entered into a definitive agreement with NuVasive, Inc. (NASDAQ: NUVA) to sell Osiris' Osteocel business for up to \$85 million in upfront and milestone payments. In a separate agreement worth up to an additional \$52 million in revenue to Osiris, the company will process and supply NuVasive with Osteocel for up to 18 months. Osteocel is a viable bone matrix product that preserves the native stem cell population that resides in marrow rich bone and is intended for use in orthopedic indications for bone regeneration.

"The time for commercial scale cell therapies has arrived," said C. Randal Mills, Ph.D., President and Chief Executive Officer of Osiris Therapeutics. "We are very excited about this landmark transaction and believe it underscores the ability of Osiris to generate substantial value through our proprietary technology platform. Given NuVasive's impressive growth in the spine market, we expect them to be very successful with Osteocel and look forward to working with their team."

Mills continued, "With the continued positive developments in Prochymal™ and Chondrogen™, it is now time for Osiris to focus its efforts on the successful launch of our core products. This transaction provides Osiris with a substantial amount of non-dilutive capital over the near-term, and shapes the organization in a way that is optimal for both the Osteocel employees and the long term mission of Osiris."

Alex Lukianov, Chairman and Chief Executive Officer of NuVasive, said, "This acquisition is synergistic for both of our companies. This proven stem cell technology directly supports our strategy of expanding our offering of innovative and proprietary products. Osteocel provides our exclusive sales force with a unique stem cell-based bone graft that is complementary to our Formagraft product and will add meaningful revenue in the short term. This transaction also includes an opportunity for our companies to collaborate together on the next generation, culture expanded version of Osteocel."

As part of the transaction, Osiris retains the rights to culture expanded versions of the product, previously referred to as Osteocel-XC. However, included in the agreement is an option for NuVasive to acquire the rights to the expanded version of the product at predefined terms as well as a right of first negotiation if Osiris elects to partner the product with a third-party.

Completion of the transaction is subject to Hart-Scott-Rodino review, Osiris shareholder approval and other customary closing conditions.

Osiris will discuss details of the transaction during the Company's first quarter earnings call on Friday, May 9, 2008 at 9:00 a.m. EDT. To access the web cast, visit 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) 397-0291 (U.S. participants) or (719) 325-4920 (international participants).

A replay of the conference call will be available approximately two hours after the completion of the call through May 23, 2008. Callers can access the replay by dialing (888) 203-1112 (U.S. participants) or (719) 457-0820 (international participants). The audio replay passcode is 4062144. To access a replay of the webcast, visit the Investor Relations section of the company's website at <http://investor.osiris.com/events.cfm>.

About Osteocel

Osteocel is a bone matrix product that preserves the native stem cell population found in marrow rich bone and is offered for the repair, replacement or reconstruction of bone defects. It is similar to autograft not only because it is biologically active, but because it is the only product available that provides the three beneficial



properties of autograft: osteoconduction, osteoinduction, and osteogenesis. Osteocel allows surgeons to offer benefits of these properties to their patients without the discomfort and potential complications of autograft harvesting, in addition to eliminating the time spent on a secondary procedure.

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. 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 is 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 253 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. 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. Risks and uncertainties related to the proposed sale of our Osteocel product line include the risk that the conditions relating to the closing of the sale transaction may not be satisfied, or may be delayed, or that the terms may be altered for any reason; changing relationships with customers, suppliers or employees; the risk that we may not be able to fully perform or to manufacture sufficient quantities of product for any reason, including raw material availability, to generate milestone payments and manufacturing revenue. 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; our manufacturing capabilities; types of regulatory frameworks we expect will be applicable to our potential products; and results of our scientific research. Additional factors that could cause our actual results to differ materially from those anticipated in forward-looking statements, include 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. You should not unduly rely on 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.

**For additional information, please contact:
Erica Elchin, Osiris Therapeutics, Inc. at (443) 545-1834**

**Media Contacts:
Stacey Holifield/Andrew Law**



Schwartz Communications
(781) 684-0770
Osiris@schwartz-pr.com