**Grafix® Manuscript from Osiris’ Multi-center, Randomized, Controlled Clinical Trial Accepted in Peer-Reviewed Journal**

The trial demonstrated the overwhelming efficacy of Grafix compared to conventional wound therapy in the closure of Diabetic Foot Ulcers

COLUMBIA, Md. – June 19, 2014 - Osiris Therapeutics, Inc. (NASDAQ: OSIR), announced today that the manuscript from its multi-center (n=20), randomized, controlled clinical trial comparing the safety and effectiveness of Grafix® to control in patients with chronic diabetic foot ulcers (DFUs) has been accepted for publication in the International Wound Journal. The peer-reviewed journal will report findings from Osiris’ trial, Protocol 302, which demonstrated the overwhelming efficacy of Grafix compared to control in the closure of DFUs over 12 weeks (62% vs. 21.3%, p=0.0001, n=97). Entitled “The Efficacy and Safety of Grafix for the Treatment of Chronic Diabetic Foot Ulcers: Results of a Multicenter, Controlled, Randomized, Blinded, Clinical Trial”, the publication will also highlight the trial’s secondary endpoints – all of which showed statistically significant improvements for patients treated with Grafix compared to control. Grafix was not only favored in time to wound closure (42 days vs. 70 days, p=0.019), number of treatment applications (6 vs. 12, p=0.0001) and probability of wound closure by 12 weeks (67.1% vs. 27.1%, p<0.0001) but also in important safety endpoints including number of patients with adverse events (44% vs. 66%, p=0.031) and wound related infections (18% vs. 36.2%, p=0.044). The publisher expects the electronic publication to be available in July, with the hard copy to follow.

“Our diabetic foot ulcer patients have an exciting treatment option with Grafix, as this multi-center trial represents the first successful multi-center trial in this space in over a decade,” said Dr. Larry Lavery, lead author and Professor of Surgery at the University of Texas Southwestern. “Major multi-center trials like this are the highest form of evidence and eliminate the bias seen in smaller, single center studies. Wound closure can be difficult, and Grafix demonstrated a relative improvement of 191% over control – the highest reported among wound care products tested in similarly rigorous trials.”

In the trial, patients were randomized to receive Grafix or control, which included debridement, a non-adherent dressing, and standardized off-loading. Patients were followed weekly for up to 12 weeks during the treatment phase. Patients that received control and did not heal within 12 weeks were able to receive Grafix in an open-label crossover arm of the trial for up to 12 additional weeks. In patients participating in this crossover phase, Grafix closed 66% of wounds in a median time of 42 days.

“This trial highlights Osiris’ commitment to providing sound clinical data to support the science behind our innovative products,” said Lode Debrabandere, Ph.D., President and Chief Executive Officer of Osiris. “We are pleased that the manuscript has been accepted for publication, and we want to thank all of the investigators, institutions, and patients that participated in our trial.”

**About the Trial (Protocol 302)**

Protocol 302 is a single-blind, randomized, controlled multi-centered trial evaluating the efficacy and safety of weekly applications of Grafix for the treatment of chronic diabetic foot ulcers. A total of 97 patients were enrolled at 20 leading wound care centers across the United States. Patients between 18 and 80 years of age with confirmed type 1 or type 2 diabetes and chronic diabetic foot ulcers on the dorsal or plantar surface of the foot were randomized to Grafix or control at a 1:1 ratio. Ulcers had to be present for at least 4 weeks prior to randomization and be between 1 cm² and 15 cm² in size. Patients were excluded from the trial if the ulcer decreased with more than 30% during the one week screening period. Patients received treatment weekly for up to 12 weeks. The primary endpoint measures complete wound closure by 12 weeks as determined by the
investigator and confirmed by an independent, blinded Wound Core Lab. Secondary endpoints include complete wound closure rates for those patients that complete all scheduled treatments, time to wound closure, number of applications and adverse events, including reduction in infections. Patients randomized to control, who did not heal within 12 weeks, entered a cross-over arm for evaluation in an additional 12 week open-label treatment with Grafix.

**About Grafix**

Grafix is a cryopreserved placental membrane for acute and chronic wounds. It is a flexible, conforming membrane that is applied directly at the site of the wound. Grafix is produced by Osiris’ BioSmart™ Intelligent Tissue Processing which maintains the integrity of the extracellular matrix, growth factors, and endogenous fibroblasts, epithelial cells and mesenchymal stem cells of the native tissue.

**About Osiris Therapeutics**

Osiris Therapeutics, Inc. is the leading stem cell company, having developed the world’s first approved stem cell drug, remestemcel-L for graft versus host disease. Osiris’ products include Grafix, a cryopreserved placental membrane for acute and chronic wounds, Cartiform®, a viable cartilage mesh for cartilage repair and the latest addition to Osiris’ line of products, OvationOS®, a viable bone matrix for bone repair and regeneration. Osiris is a fully integrated company with capabilities in research, development, manufacturing and distribution. Osiris has developed an extensive intellectual property portfolio to protect the company's technology and commercial interests.

Osiris, Grafix, Cartiform and OvationOS are registered trademarks of Osiris Therapeutics, Inc. 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 may include, without limitation, statements regarding any of the following: our product development efforts; our clinical trials and anticipated regulatory requirements, and our ability to successfully navigate these requirements; the success of our product candidates in development; status of the regulatory process for our products and product 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 marketed Biosurgery products (including Grafix, Ovation, OvationOS and Cartiform) and Biosurgery products under development; our cash needs; patents, trademarks and other proprietary rights; the safety and ability of our products and potential products to address medical needs; our ability to supply a sufficient amount of our marketed products or product candidates and, if approved or otherwise commercially available products, to meet demand; our costs to comply with governmental regulations; our plans for sales and marketing; our plans regarding facilities; types of regulatory frameworks we expect will be applicable to our products and potential products; and results of our scientific research. Additional risks and uncertainties related to the sale of our ceMSC assets and the related transactions contemplated by the Purchase Agreement with Mesoblast include typical business transactional risks, the risk of changing relationships with customers, suppliers or employees, the risk associated with the disposition of our ceMSC assets and the increased relative dependence on and importance of our other business including our Biosurgery business, the risk that we may not be able to fully
benefit from the transactions through milestone payments or royalties, payment risks, including the risk associated with receipt of equity as consideration, in lieu of cash, and the risk of dependence on others to achieve results upon which milestone or royalty payments to us are conditioned. 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 and other Periodic Reports filed on Form 10-Q, 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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