



Osiris and Genzyme Partner to Develop Medical Countermeasures for Nuclear and Radiological Threats

Program will Adapt Leading Stem Cell Therapy to Aid U.S. and Allied Nations in Emergency Preparedness

COLUMBIA, Maryland – July 26, 2007 - Osiris Therapeutics (NASDAQ: OSIR) and Genzyme Corp. (NASDAQ: GENZ) today announced the formation of a partnership to address the significant need for effective countermeasures to nuclear terrorism and other radiological emergencies. The initial focus of the partnership will be to develop Prochymal™, a formulation of adult stem cells derived from bone marrow, to treat the potentially lethal complications of acute radiation syndrome (ARS).

Prochymal™ is currently in Phase III clinical trials for the treatment of GvHD and Crohn's Disease and has demonstrated preliminary efficacy in the treatment of patients experiencing first-time heart attacks. These trials have shown Prochymal's potential to reverse cellular damage and improve survival in disease states similar to ARS.

"After an extensive evaluation of the indication, product, and process, we are properly positioned to launch this major new initiative," said C. Randal Mills, Ph.D., President and Chief Executive Officer of Osiris. "Our scientists recognized an opportunity to efficiently enter this new market by leveraging the significant overlap that exists between our ongoing development activities for Prochymal™ and the requirements demanded of an ARS product. We then assembled a team that would give us the greatest chance for success. The resources and capabilities of Genzyme fit very well with this initiative."

Currently, Prochymal™ is the only stem cell therapy to have been granted Fast Track status by FDA.

"Based upon the clinical data generated by Osiris, coupled with our own internal research, we believe there is potential for Prochymal™ to be of significant therapeutic benefit to patients suffering the effects of ARS," said John M. McPherson, senior vice president and head of biologics research and development, Genzyme Corp. "This partnership brings together a powerful combination of promising first-in-class therapy and proven experience commercializing breakthrough technology. Together, we make a good team in the effort to strengthen the preparedness of the United States and its Allies."

Under the terms of the contract, Osiris and Genzyme will collaborate in the preparation and execution of development and purchase agreements made with U.S. and Allied governmental agencies. Osiris will contribute its lead stem cell drug product Prochymal™, and corresponding safety and efficacy database to the effort, while Genzyme will lend its vast product development and large-scale commercialization expertise. The agreement provides for Genzyme to receive a royalty on sales of Prochymal™, limited to those sales made under contract to U.S. or Allied Governmental Agencies for Emergency Preparedness.

More information about Prochymal™ and its development for ARS can be found on the Osiris website at www.Osiris.com.

About Acute Radiation Syndrome

Acute Radiation Syndrome (ARS) involves damage to DNA predominately affecting the rapidly dividing cells of the gastrointestinal (GI) tract, skin and the bone marrow. The clinical manifestation of ARS can be divided into four distinct stages: prodrome, latency, manifest illness, and recovery or death. Typically, the prodromal phase consists of GI symptoms that include abdominal pain, nausea, vomiting and diarrhea lasting 2 to 6 days. Depending on exposure, during the latent phase there is a brief abatement of symptoms as the patient appears to recover from the initial illness. However, within days to weeks, a hematopoietic (blood-forming) crisis ensues as a consequence of the depletion of both white blood cell and red blood cell progenitors within the bone marrow. The manifest illness is characterized by immunosuppression, fever and diarrhea. Those patients who do not recover will die within days to several months following initial exposure.



About Prochymal™

Prochymal™ is a highly purified formulation of mesenchymal stem cells (MSCs) that are grown in culture, permitting large-scale production. The MSCs utilized in Prochymal™ are isolated from the bone marrow of healthy adult donors. Because the cells can be expanded, thousands of doses can be produced from a single donation. Numerous studies have demonstrated that the stem cells in Prochymal™ are able to safely facilitate tissue repair through a number of mechanisms. Specifically, MSCs are able to down-regulate severe inflammation, which is responsible for much of the tissue destruction that occurs as a result of radiation exposure. MSCs also work at the cellular level to rebuild damaged tissue through the coordinated release of tissue specific growth factors. Preliminary studies suggest that these characteristics are able to abate many of the complications of ARS.

About Genzyme

One of the world's leading biotechnology companies, Genzyme is dedicated to making a major positive impact on the lives of people with serious diseases. Since 1981, the company has grown from a small start-up to a diversified enterprise with more than 9,500 employees in locations spanning the globe and 2006 revenues of \$3.2 billion. In 2007, Genzyme was chosen to receive the National Medal of Technology, the highest honor awarded by the President of the United States for technological innovation. In 2006 and 2007, Genzyme was selected by FORTUNE as one of the "100 Best Companies to Work for" in the United States.

With many established products and services helping patients in nearly 90 countries, Genzyme is a leader in the effort to develop and apply the most advanced technologies in the life sciences. The company's products and services are focused on rare inherited disorders, kidney disease, orthopaedics, cancer, transplant, and diagnostic testing. Genzyme's commitment to innovation continues today with a substantial development program focused on these fields, as well as immune disease, infectious disease, and other areas of unmet medical need.

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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