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Acceleron Pharma Presents ACE-011 Preclinical Data Demonstrating Both Anabolic and Anti-Resorptive Properties

Novel Approach Represents Significant Advance for the Treatment of Bone Loss

CAMBRIDGE, MA – September 18, 2006 – Acceleron Pharma, Inc., a biopharmaceutical company involved in the development of regenerative therapeutics, presented preclinical data highlighting the anabolic bone activity of ACE-011, the company's lead drug candidate currently in a phase 1 clinical trial, at the Annual Meeting of the American Society for Bone and Mineral Research (ASBMR).

Data presented on September 17, 2006 by Scott Pearsall, Ph.D., Director of Preclinical Pharmacology at Acceleron, generated in a mouse model of osteoporosis that showed ACE-011 has positive effects on trabecular and cortical bone, increased bone mineral density and bone strength. Furthermore, ACE-011 increased overall bone mass through a combined anti-resorptive and anabolic effect.

Ernesto Canalis, M.D., Professor of Medicine, University of Connecticut School of Medicine at St. Francis Hospital and Medical Center in Hartford, CT, performed the histomorphometry analysis that contributed to the evidence of the bone anabolic properties of ACE-011. "Following two weeks of treatment in mice, ACE-011 increased bone formation while simultaneously decreased bone resorption that resulted in significantly increased bone volume. These results are encouraging and we continue to investigate the anabolic effects of ACE-011." Mary Bouxsein, Ph.D., Assistant Professor, Department of Orthopedic Surgery at Harvard Medical School and a co-author on the study whose laboratory performed biomechanical measurements of ACE-011 said, "Preclinical studies with ACE-011 have shown positive effects on numerous measures of bone microarchitecture and strength. I look forward to further studies exploring the effects of ACE-011."

"There is tremendous need for a novel bone anabolic agent that can rebuild bone even after substantial bone loss has already occurred," said Dr. Matthew L. Sherman, M.D., Chief Medical Officer at Acceleron. "ACE-011 is a promising compound for treatment of patients with progressive bone loss, including osteoporosis, as well as those who are afflicted with multiple myeloma, bone metastases and treatment-induced bone loss."

About ACE-011

ACE-011, a novel bone anabolic agent currently in phase 1 clinical trials, is a protein therapeutic based on the activin receptor IIA. In numerous preclinical models of bone loss, ACE-011 has demonstrated beneficial effects on both trabecular and cortical bone. ACE-011 increased bone mineral density, improved bone architecture, increased the mineral apposition and bone formation rates and improved bone mechanical strength. These effects have been demonstrated in therapeutic models of bone loss in which ACE-011 has stimulated bone formation – a significant unmet medical need that is underserved by current treatments for bone loss. ACE-011 is based on technology exclusively licensed from the Salk Institute.

About Bone Loss

Bone loss is recognized as a disease with significant clinical concerns for patients and economic challenges to society. Osteoporosis is the most common bone disease in humans and, according to the National Osteoporosis Foundation, 10 million Americans are estimated to have the disease and almost 34 million more are estimated to have osteopenia or low bone mass, placing them at increased risk for osteoporosis. Osteoporosis is responsible for more than 1.5 million fractures annually and direct expenditures for hip fractures alone is estimated to cost society more than \$18 billion. Bone loss and weakening is also present in other diseases, such as multiple myeloma which is the second most common hematologic malignancy with approximately 50,000 patients in the U.S. currently living with the disease. In multiple myeloma, the malignant cells cause bone lesions which weaken the bone, resulting in pain and increasing the risk of fractures in the bone.

About Acceleron Pharma

Acceleron is a privately held biopharmaceutical company that is focused on developing and commercializing regenerative therapeutics. The company's scientific platform is based on its unique position to harness the clinical potential of naturally-occurring tissue growth factors to treat diseases with significant unmet medical need. The company's lead program is being developed to reverse bone loss in diseases such as osteoporosis and cancer. Additionally, the company has therapeutic programs in the areas of muscle growth, angiogenesis and metabolic diseases. Acceleron utilizes proven biotherapeutic

technologies and capitalizes on the company's internal GMP manufacturing capability to rapidly and efficiently advance therapeutics from its R&D platform to create a range of drug products. The investors in Acceleron are Advanced Technology Ventures, Flagship Ventures, OrbiMed Advisors, Polaris Ventures, Sutter Hill Ventures and Venrock Associates.

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