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Acceleron Initiates Phase 1 Clinical Trial of ACE-011, a Novel Treatment for Bone Loss

Acceleron Becomes a Clinical-Stage Company

CAMBRIDGE, MA – June 21, 2006 – Acceleron Pharma, Inc., a biopharmaceutical company involved in the development of regenerative therapeutics, announced that it has initiated a Phase 1 clinical trial of ACE-011, a novel treatment for bone loss disease, particularly osteoporosis. ACE-011 is the first regenerative therapeutic to enter human clinical trials from Acceleron's scientific platform that utilizes the body's own naturally-occurring growth factors.

"The initiation of the ACE-011 Phase 1 trial represents a significant advance in the effort to develop novel regenerative therapeutics that have significant potential in the treatment of bone loss," said Jasbir Seehra, PhD, Chief Scientific Officer and a founder of Acceleron. "Based on extensive evidence from preclinical studies, ACE-011 has the potential to rebuild bone even after substantial bone loss has already occurred. The preclinical data strongly suggests that ACE-011 could fundamentally change the treatment of bone loss."

Acceleron is conducting the Phase 1 study in healthy post-menopausal women. The study is a randomized, placebo-controlled, a single ascending dose study designed to evaluate safety, tolerability, and pharmacology properties of ACE-011.

"Both men and women experience progressive bone loss throughout their adult life and most currently available treatments attempt to only slow the rate of bone loss, but do not rebuild lost bone," said Matthew L. Sherman, MD, Chief Medical Officer of Acceleron. "Our goal with ACE-011 is to stimulate bone formation to prevent fractures which can lead to pain and serious, life-threatening complications. There remains a major unmet need in the 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."

Following the Phase I study of ACE-011, Acceleron will introduce other regenerative drug candidates into clinical development and will continue to build integrated pharmaceutical capabilities to develop these candidates into new therapies.

"We are excited at how quickly we were able to have ACE-011 enter the clinic," said Glenn Batchelder, Chief Executive Officer of Acceleron. "In less than two years, Acceleron has advanced from product concept to a Phase I trial, representing a major milestone in Acceleron's rapid progress as a product development company."

About ACE-011

ACE-011 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 and most importantly, 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, Polaris Ventures, Sutter Hill Ventures and Venrock Associates.

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