Fate Therapeutics
Guiding cells to improve life

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Fate Therapeutics Granted Exclusive License by The Regents of the University of California to Stem Cell Modulators for Osteo-Regeneration

La Jolla, CA – Fate Therapeutics, Inc. announced today that it has acquired exclusive intellectual property rights covering small molecule compositions and methods for inducing bone formation from The Regents of the University of California. These proprietary osteogenic agents were developed by Farhad Parhami, Ph.D., professor of medicine at University of California, Los Angeles, in collaboration with Michael Jung, Ph.D., professor of chemistry and biochemistry, and have been shown in vivo to exhibit osteo-regenerative activity. While many current medications aimed at addressing bone deficiencies work by preventing further decay, osteogenic agents stimulate positive bone growth and may offer an improved course of action in orthopedic medicine ranging from bone fractures to osteoporosis. The exclusive rights acquired today by Fate Therapeutics continue to bolster the Company's platform of Stem Cell Modulators (SCMs) – small molecules and biologics that seek to modulate adult stem cells within the body to guide cell fate for therapeutic purposes.

"Dr. Parhami and his research team have not only advanced the understanding of the biology around bone formation but also identified and created small molecules that may be used to induce the differentiation of adult stem cells in the body for osteo-regenerative medicine," said Paul Grayson, president and CEO of Fate Therapeutics. "The potential of these novel small molecules has been confirmed in several different in vivo proof of concept studies, and we look forward to their continued preclinical development for bone generation."

Adult stem cells are naturally-occurring cells found in almost all tissues or organs in the body and are primarily responsible for maintaining and repairing their native tissue. For example, mesenchymal stem cells are multipotent cells that can differentiate into a variety of cell types, including osteoblasts, chondrocytes, myocytes and adipocytes. Dr. Parhami's discovery of specific pathways and small molecules that can induce differentiation to mature, bone-forming osteoblasts offers a new mechanism of intervention, which may be applied to treat a number of bone injuries and conditions, including non-union fracture, spinal fusion or osteoporosis. By collaborating with the foremost researchers and clinicians in the field of adult stem cell biology, Fate Therapeutics is continuing to expand its leadership position in the discovery and development of SCMs for regenerative medicine.

"Having an industry partner is essential to a successful translational drug discovery project, and we are excited about our collaboration with Fate Therapeutics to realize the full potential of our discoveries," said Dr. Parhami. "Our work has uncovered novel strategies and mechanisms for lineage-specific differentiation to an osteoblast phenotype. The ability to activate specific populations of stem cells in the body to promote bone regeneration may have many orthopedic clinical applications." Dr. Parhami continued, "For example, with traumatic bone injuries, such as non-union fractures where the break in the bone cannot be healed without medical intervention, patients must undergo complicated surgeries and long recovery times. In the case of degenerative bone diseases, such as osteoporosis, current therapies focus on blocking bone degeneration rather than inducing formation. Being able to promote bone growth with novel osteogenic small molecules represents the next-generation of therapeutic agents for orthopedic medicine."