

New method yields potent, renewable human stem cells with promising therapeutic properties

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The curative and therapeutic potential of mesenchymal stem cells (MSCs) offers much promise, as these multipotent cells are currently being tested in more than 300 clinical trials in a range of diseases. A

new, easier, and more reliable way to make large quantities of highly potent MSCs could accelerate progress toward their use in regenerative medicine, as described in an article in *Stem Cells and Development*.

Robert Lanza, MD and colleagues from Advanced Cell Technology (Marlborough, MA) and the David Geffen School of Medicine, UCLA (Los Angeles, CA), developed an innovative method for deriving MSCs from human embryonic [stem cells](#) (hESCs) through the use of a developmental precursor called the hemangioblast. They describe the technique and evidence of therapeutic efficacy using the hESC-MSCs to treat mouse models of lupus erythematosus and uveitis in the article "[Mesenchymal Stem Cell Population Derived from Human Pluripotent Stem Cells Displays Potent Immunomodulatory and Therapeutic Properties](#)."

"This new population of hESC-derived MSCs has a 30,000-fold greater proliferative capacity than bone marrow-derived MSCs," says Dr. Lanza, Chief Scientific Officer, Advanced Cell Technology. "In addition to being easy to derive in very large numbers, they are more youthful and live much longer." Dr. Lanza is Editor-in-Chief of BioResearch Open Access, a peer-reviewed open access journal from Mary Ann Liebert, Inc., publishers that provides a rapid-publication forum for a broad range of scientific topics.

More information: The article is available on the *Stem Cells and Development* [website](#).

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