

5<sup>th</sup> International Conference on

# Tissue Engineering & Regenerative Medicine

September 12-14, 2016 Berlin, Germany

## TSG-6 as a biomarker to predict efficacy of human mesenchymal stem/progenitor cells (hMSCs) in modulating sterile inflammation *in vivo*

**Ryang Hwa Lee**

Texas A&amp;M Health Science Center, USA

Human mesenchymal stem/progenitor cells (hMSCs) from bone marrow and other tissues are currently being administered to large numbers of patients. The trials are proceeding even though cultures of the cells are heterogeneous, and there is large variability among preparations of hMSCs due to differences among donors, culture conditions, and inconsistent tissue sampling. This is also confounded by the lack of definitive biomarkers to predict the efficacy of hMSCs *in vivo*. Therefore, the value of the data obtained from current clinical trials could be compromised by variations in the quality of the hMSCs employed. To ensure such trials continue generating quality data, there is a critical need for simple *in vitro* bioassays to predict hMSC efficacy *in vivo*. This presentation will provide the first biomarker that can predict the efficacy of hMSCs in suppressing sterile inflammation *in vivo*.

### Biography

Ryang Hwa Lee is an Assistant Professor of Medicine at the Institute for Regenerative Medicine, Texas A&M University System Health Science Center. She has earned her PhD in Physiology from School of Medicine, Pusan National University in 2003 on the "Characterization of human adipose and bone marrow derived mesenchymal stem cells (MSCs)". In 2003, she joined the Center for Gene Therapy at Tulane University Health Sciences Center as a Post-doctoral Fellow for a continuous study on MSCs with Dr. Darwin Prockop, a pioneer in the MSC field. She has joined the Institute for Regenerative Medicine in 2008 as a Research Scientist and the Faculty of Texas A&M Health Science Center in the year 2009. Currently, her research group focuses on investigating the underlying cellular and molecular mechanisms of therapeutic effects of MSCs in animal models of human diseases including sterile inflammation-mediated injury, type 1 diabetes and cancer.

rlee@medicine.tamhsc.edu

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