*mod*RNA Therapeutics vs. hiPSC-derived Cell and Cell-products for Myocardial Repair in Large Mammals: Remuscularization of injured ventricle

Jianyi (Jay) Zhang, MD, PhD

Abstract

Transplantation of engineered myocardial tissue patch constructs with either hiPSC derived cardiac progenitor cells or cell-products for cardiac repair, is emerged as an exciting treatment option for post infarction LV remodeling. Beneficial effects may be due to direct remuscularization from endogenous or exogenous mechanisms, or paracrine mechanism leading to immune-modulation, mobilization and/or activation of endogenous regeneration mechanisms with subsequent promotion of neovascularization, myocyte re-enter the cell-cycle, or inhibition of apoptosis, and thus attenuation of LV dilatation progression.

Participants will be able to discuss and explain the current understanding the major roadblocks in cardiac cell therapy, and the potential approaches to overcome these problems. One of the major objectives is to make the cell and cell products become the treatment options in the future. Participants will also share their knowledge and interests in pursuing the novel applications in this emerging field of mRNA therapeutics.