**ACELLULAR BIOLOGICS FOR CARDIAC REGENERATION**

**A. Behfar**

Mayo Clinic, Rochester, MN, USA

The global drive to generate new curative therapies is fueled by a growing unmet perpetuated by the heart failure pandemic. Regenerative trials in cardiovascular disease have focused on the use of cell-based therapy in acute myocardial injury, in order to halt progression towards heart failure, or in congestive heart failure, to regenerate a deteriorating myocardium. Worldwide, large populations of patients have been treated with adult stem cell therapy with phase III trials now underway to validate the therapeutic value of cell therapy in the heart. To overcome the variability and significant cost of stem cell therapies, off the shelf technologies have been developed that are able to consistently deliver regenerative cues, avoiding the need to utilize stem cells. By creating regenerative therapies as an “off-the-shelf” product, the consistency of efficacy, cost and accessibility of this technology significantly improves. Thus, by building on the “first generation” cellular regenerative experience, the field is evolving to a new era where targeted molecular interventions can be pursued to ensure a regenerative impact following intervention.