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## Regeneration of infarcted myocardium using activated adult stem cells

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Regeneration of infarcted myocardium is still a big challenge in clinic. Stem cell therapy has shed light to regenerate the infarcted myocardium. However, low survival rate of transplanted stem cells and very low terminal differentiation of transplanted stem cells limit therapeutic effects of stem cells to achieve functional and structural regeneration of infarcted myocardium. Recently our lab developed a novel activated adult stem cell therapy for infarcted myocardium. We applied bio-activated strategy to pre-activate adult endogenous cardiac stem cells and adult bone marrow stem cells and then transplanted into infarcted myocardium in rat model. We found that these novel adult stem cell therapies were able to decrease the infarct size and improve the myocardial function significantly. Importantly, the therapeutic effect of this novel therapy is more effective than non-activated stem cells. Our finding suggested that this novel strategy might be considered as novel stem cell therapy for us to further develop the novel approach to regenerate infarcted myocardium.

### Biography

Cai Dongqing completed M D at Guangzhou Medical College in 1987, PhD at The Chinese University of Hong Kong in 2000, Postdoctoral Associate at Weill Medical College of Cornell University, USA in 2000-2003. He works as a Professor and Director at Key Laboratory of Regenerative Medicine, Ministry of Education, Jinan University. He is a Director at Department of Developmental and Regenerative Biology, Jinan University. His Scientific interests are Aging and microenvironment in regeneration of myocardial infarction (MI); Cardiac vascular specific targeting and therapy (stem cell and therapeutic angiogenesis) for MI; Aging and regeneration of Tissue & Organ. He published 40 SCI papers. Grant: 2003 - present: The Major Research plan of the National Natural Science Foundation of China-Key program, National Key R&D Program of China, 863, International collaboration grant of Ministry of Science & Technology, Seven NSFC-grants, etc.

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