



Stem Cells International

Special Issue on
**Advancing Stem Cell Research for Cardiovascular
Diseases**

CALL FOR PAPERS

Stem cells have demonstrated great potentials in therapeutic development of various human diseases including cardiovascular diseases, the leading cause of morbidity and mortality worldwide accounting for more than 7 million deaths per year. In the past fifteen years, a variety of types of cells, including embryonic stem cell (ESCs), induced pluripotent stem cell (iPSCs), and adult stem cells (ASCs) (e.g., cardiac stem cell, skeletal myoblasts, bone marrow-derived stem cells, mesenchymal stem cells, blood circulating endothelial progenitor cells, and adipose-derived stem cell), have been examined in both animal and human clinical trials for their potential to promote cardiovascular repair and/or regeneration. Although the outcomes are exciting and promising, the underlying mechanisms for improved cardiac function are still poorly understood and some of the observations debatable.

The purpose of this special issue is to call for high-quality research papers and review articles focusing on the new development and recent advances of stem cell-based basic research and clinical trials in the cardiovascular field. We therefore invite investigators to contribute their original research articles and reviews to this special issue.

Potential topics include, but are not limited to:

- ▶ Recent advances in stem cell-based therapy for repairing cardiovascular diseases using animal models
- ▶ Recent advances of clinical trials in stem cell-based therapies for ischemic heart disease and heart failure
- ▶ Advances in understanding the underlying mechanism for improved cardiac function
- ▶ Advance of reprogramming and transdifferentiation approaches for cardiovascular regeneration
- ▶ Strategies to improve stem cell-based therapies for cardiovascular diseases
- ▶ Controlled differentiation, isolation, and purification of cardiac lineages (cardiomyocytes, endothelial cells, and smooth muscle cells) and subtypes of cardiomyocytes (nodal, atrial, and ventricular cardiomyocytes) from ESCs, iPSCs, and ASCs
- ▶ Recent advances of biomaterials in stem cell-based therapy and basic research for cardiovascular diseases

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/sci/ascr/>.

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First Round of Reviews

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