

Special Issue on  
**Healing Heart and Brain with Stem Cells and Biomaterials**

# CALL FOR PAPERS

The capability to heal damaged tissues and, therefore, to recover the functionality of organs prompted researchers in the identification and employment of stem cells since 1960. Until now, stem cells have been detected and obtained by all adult tissues (e.g., blood, bone marrow, fat, teeth, heart, and brain) and also from the reprogramming of differentiated cells. Nevertheless, beyond recent controversial cases, their clinical use is still limited to a few well-known procedures, such as bone marrow transplant. A collection of novel data is required for futuristic step forward so as to make irreparable organs able to heal themselves.

Among other uses, stem cells have been proposed as potential therapeutic tool to reverse cardiovascular and neurodegenerative diseases. In this context, their role as such or as bioengineered tissues, after their interaction with biomaterials, is under heavy investigation.

With this call, we invited researchers to submit original works and review articles that explored the role of biomaterials in committing and/or recruiting stem and resident cells and, therefore, healing tissues. We are interested in articles mainly focusing on cardiopulmonary, neural, and vascular diseases, spanning from bench to bedsides. Thus, *in vitro* and *in vivo* studies will be both welcome.

Potential topics include but are not limited to the following:

- ▶ Stem cells and artificial tissues engraftment: methods and outcomes
- ▶ Autocrine and paracrine role of engrafted stem cells as such or as engineered tissue
- ▶ Exogenous and endogenous stem cells recruitment at the lesion site
- ▶ Role of stem cells and bioengineered tissues in atherosclerosis
- ▶ Recent advances in the use of stem cells and bioengineered tissues in myocardial injuries
- ▶ Development of stem cell based strategies in brain ictus
- ▶ Identification of potential tools based on stem cells and bioengineered tissues to address neurodegenerative pathologies

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

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