

Tentative Outline

Special Thematic Issue for Current Stem Cell Research & Therapy

Title of thematic issue: Signaling pathways involved in stem cell differentiation and relevant therapy

Guest Editor: Lingbo Kong, MD, PhD

Aims & Scope:

Stem cells interpret signals from their microenvironment while simultaneously modifying the niche through secreting factors and exerting mechanical forces. Many soluble stem cell cues have been determined over the past century, but in the past decade, our molecular understanding of mechanobiology has advanced to explain how passive and active forces induce similar signaling cascades that drive self-renewal, migration, differentiation or a combination of these outcomes. All these findings directly affected further molecular understanding of relevant diseases and treatment. Therefore, improvements in understanding of these signaling pathways cascades, will greatly improve the knowledge not only in stem cell culture methods, materials and biophysical tools development, but also for improve the knowledge of relevant diseases developing and treatment. Here, we in this special theme issue, we try to organize experts in this fields to summarize recent research findings about signaling pathways involved in stem cell differentiation and relevant therapy, then publish a series of review articles and research papers in order to offer perspective on ongoing challenges.

Keywords: stem cell differentiation, Signaling pathways.

Subtopics:

The subtopics to be covered within this issue are listed below:

- General understanding of extracellular & intracellular signaling pathways involved in stem cell fate and maintenance
- Classical and novel signaling pathways involved in skeletal bone maintenance and the effects of their role in relevant treatment.
- Cytokines and integrin's regulation for the signaling pathways during the stem cell's differentiation
- Classic and novel signaling pathways involved cancer: targeting the NF-kB & Syk signaling
- Inflammatory signaling pathways cross-talked with other cytokines.

Schedule:

- ✧ Manuscript submission deadline: February 11th, 2018
- ✧ Peer Review Due: April 1st, 2018
- ✧ Revision Due: May 1st, 2018
- ✧ Announcement of acceptance by the Guest Editors: June 1st, 2018
- ✧ Final manuscripts due: July 1st, 2018

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