

Tentative Outline

Special Thematic Issue for Current Stem Cell Research & Therapy

Title of thematic issue: Stem Cells under Stress

Guest Editors: *Aysen Gunel-Ozcan (MD, PhD)*

Aims & Scope:

Stress management of stem cells cause differentiation, apoptosis, exhaustion and abnormal proliferation according to the type and duration of the stress. Stress types can be simply classified in two groups as extrinsic and intrinsic stress. Extrinsic stress includes physical and chemical factors such as abnormal cell contacts, abnormal temperature, abnormal pressure, abnormal nutrition levels/types, abnormal signals by hormones, cytokines or growth factors. Intrinsic or endogenous stress mainly includes deleterious metabolites, replication errors and telomere shortening. Cellular stress response pathways are organelle specific, crosstalk each other in a network and involved in regulating stem cell fate. This thematic topic will present reviews and minireviews on stem cell behaviour under cellular stress conditions. Detailed understanding of cellular stress factors that affect stem cell behavior may help to produce most convenient cell types for use in regeneration or combating cancer and age-associated diseases.

Keywords: cellular stress, stem cells, inflammation, microenvironment

Subtopics:

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

- Organelle stress response pathways in stem cell fate
- Inflammatory microenvironment and stem cells
- Replication stress on stem cell fate
- Impact of culture induced stress on regenerative potential of stem cells
- Therapeutic strategies targeting cellular stress

Schedule:

- ✧ Manuscript submission deadline: November 15th, 2019
- ✧ Peer Review Due: January 1st, 2020
- ✧ Revision Due: February 1st, 2020
- ✧ Announcement of acceptance by the Guest Editors: March 1st, 2020
- ✧ Final manuscripts due: March 15th, 2020

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