

Special Issue

Unique Response of Pluripotent Stem Cells to External Stimuli and Stresses

Message from the Guest Editors

In pluripotent stem cells (PSCs) as embryonic and induced pluripotent stem cells (iPSCs), characteristics such as epigenetic state, gene expression profiles, and the cellular localization of proteins are quite different from those of differentiated and somatic cells. Due to these differences, the response to external stimuli and stresses such as hypoxic, heat, and oxidative stress and chemicals, as well as ligands of channels and receptors, etc., is also different between PSCs and differentiated cells. Further, the differences in stress response between cancer stem cells and cancer cells is also an attractive research field for the chemotherapies of cancers. In this Special Issue, we invite original research articles and reviews on the following subjects: (1) the molecular mechanism of response to any stresses in stem cells, including pluripotent, multipotent, and cancer stem cells; (2) the implication of stress response in their stemness and differentiation; (3) iPSC-derived stress-related disease models and their disorders of stress response; (4) chemical or environmental toxicology in embryos and embryonic stem cells.

Guest Editors

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Deadline for manuscript submissions

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A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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