

## Special Issue

# Biochemical Mechanisms and Physiological Implication of Stem Cell Differentiation

### Message from the Guest Editors

Stem cells (SCs) can be isolated from various sources and are capable of differentiating into different cell types. They have garnered significant interest due to their key role in regenerative medicine. It is necessary to gain a deeper understanding of the mechanisms behind differentiation processes to develop appropriate therapeutic strategies, aiming to enhance the differentiation potential of resident stem cells or improve the efficacy of treatments based on differentiated cells, including adult, induced pluripotent, and embryonic stem cells. This Special Issue focuses on the cell biology, physiology, molecular biology, biophysics, and biochemical mechanisms underlying the various stages of differentiation. We particularly seek studies that compare different stem cell sources or differentiation strategies that may explain diverse physiological responses and those that develop an organoid as a potential in vitro model. This Special Issue welcomes bioinformatic analyses, review articles and original data pertaining to its scope.

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### Guest Editors

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### Deadline for manuscript submissions

31 July 2026



## Cells

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## About the Journal

### Message from the Editorial Board

*Cells* has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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### Editors-in-Chief

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#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.5 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).