

Special Issue

Stem Cell Research: Discovering the Mechanistic Understanding for Therapeutic Application

Message from the Guest Editor

Stem cells have become a cornerstone of emerging regenerative medicine strategies, aiming to utilize tissue repair to restore function to cells damaged as a result of injury, ageing or disease. This Special Issue aims to address unresolved problems in the therapeutic application of stem cells at the molecular, cellular, tissue, organ and system levels, seeking to advance existing techniques and determine novel ways of determining how stem cells can be used within the field of regenerative medicine. This Special Issue welcomes original research articles, reviews, methods and other article types focusing on (but not limited to) the following areas:

- Mechanisms of pluripotency/multipotency and self-renewal;
- Mechanisms of cell lineage differentiation and the determination of therapeutic function;
- Advanced culture methods for the scale-up and production of therapeutic products;
- Bioengineering, including the combination of stem cells with biomaterials;
- Preclinical studies investigating stem cell safety and efficacy;
- Investigational studies of stem cell safety and efficacy in clinic.

Guest Editor

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Deadline for manuscript submissions

closed (20 April 2025)



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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

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