

Special Issue

Cardiac Repair and Regeneration: From Pathogenesis to Therapeutic Perspectives

Message from the Guest Editors

This Special Issue highlights pathogenesis and cutting-edge therapeutic approaches, including the induction of pre-existing cardiomyocyte proliferation, stem-cell-based cardiac repair, the immune system's role in cardiac regeneration, the impact of micro and long noncoding RNAs, and the influence of the extracellular matrix and metabolism. By shedding light on these areas, this Special Issue aims to advance our understanding on these diseases and their therapeutic strategies. **Keywords:** cardiac damage; cardiac repair; cardiac regeneration; heart regeneration; heart failure; ischemic heart disease; cardiomyocyte; heart regeneration; cardiomyocyte proliferation; cardiomyocyte death; cardiac muscle cell; myocardial infarction; pathogenesis; polyploidization; immune cells; metabolism; cell death; tissue engineering; therapeutic; treatment

Guest Editors

Dr. Marina Leone

1. Division of Developmental Immunology, Biocenter, Medical University of Innsbruck, 6020 Innsbruck, Austria
2. Early Development, Cardiovascular, Renal and Metabolism (CVRM), AstraZeneca, Pepparedsleden 1, 43183 Mölndal, Sweden

Dr. Olaf Bergmann

Cell and Molecular Biology, Karolinska Institutet, SE-17177 Stockholm, Sweden

Deadline for manuscript submissions

20 December 2025



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/212331

*International Journal of
Molecular Sciences*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
ijms@mdpi.com

[mdpi.com/journal/
ijms](https://mdpi.com/journal/ijms)





International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



[mdpi.com/journal/
ijms](https://mdpi.com/journal/ijms)



About the Journal

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

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences,
Sez-Biochimica, Faculty of Medicine, Università Politecnica delle
Marche, Via Ranieri 65, 60100 Ancona, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore
- Q1 (Organic Chemistry)