

Special Issue

Molecular Aspects of Cancer Stem Cell Biology and Their Therapeutic Implications

Message from the Guest Editor

Cancer stem cells (CSCs) are an aggressive subpopulation of cancer cells, characterized by the unique ability to self-renew and their great plasticity, which allows them to differentiate into various cell types as well as dedifferentiate. This subpopulation also has high metastatic potential and is characterized by high expression levels of efflux pumps and therapy resistance. Standard treatments often fail to eliminate cancer stem cells, leading to significant interest in developing therapies that specifically target this subpopulation.

In this Special Issue, we encourage the submission of original research papers and reviews regarding the novel insights into CSC biology and recent advances in their therapy. We will focus on the molecular basis of the CSCs, with emphasis on key signaling pathways, stemness-related transcription factors, stemness markers, and mechanisms of therapy resistance.

Suitable topics include, but are not limited to, the following:

- Cancer stem cell biology and plasticity;
- Crosstalk between cancer stem cells and tumor microenvironment;
- Therapy resistance;
- Novel therapies targeting cancer stem cells.

Guest Editor

Dr. Tanja Matijevic Glavan

Laboratory for Personalized Medicine, Division of Molecular Medicine, Rudjer Boskovic Institute, Bijenicka 54, 10000 Zagreb, Croatia

Deadline for manuscript submissions

31 March 2026



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/256179

*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)