

## Special Issue

# Latest Research on Mesenchymal Stem Cells (2nd Edition)

### Message from the Guest Editor

Mesenchymal stem/stromal cells are found in practically all tissues and play a role in regeneration and homeostasis. They have the ability to self-renew and activate multipotency when stimulated by biochemical signals. The MSC secretome or MSC-derived extracellular vesicles (exosomes and microvesicles, EVs) have been hypothesized as a more important biological mechanism contributing to their function than their differentiation capacity. EVs play a role in cell-to-cell communication, cell signaling, and changing cell or tissue metabolism at the local or global level. MSC-derived exosomes contain, e.g., cytokines and growth factors, signaling lipids, mRNAs.

The contents of MSC exosomes are dynamic, influenced by the MSC tissue of origin, its activity, and its immediate intercellular neighbors. Thus, when MSCs are grown alongside tumor cells or in the in vivo tumor microenvironment, the exosome concentration appears to be altered. MSCs can directly donate mitochondria to recover from cell injury and rescue mitochondrial damage-induced tissue degeneration. This could promote cancer growth and spread by promoting mitochondrial exchange between cancer cells and adjacent stromal cells.

---

### Guest Editor

Prof. Dr. Marcel Costuleanu

Pathophysiology Discipline, Faculty of Dental Medicine, "Grigore T. Popa" University of Medicine and Pharmacy, 700115 Iasi, Romania

---

### Deadline for manuscript submissions

31 October 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/256758](https://mdpi.com/si/256758)

*International Journal of  
Molecular Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[ijms@mdpi.com](mailto: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)* 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, and molecular biophysics. *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. José L. Quiles  
Department of Physiology, Institute of Nutrition and Food Technology  
"Jose Mataix", Biomedical Research Center, University of Granada,  
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

---

### 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, CAPus / SciFinder, and other databases.

#### Journal Rank:

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