

## Special Issue

# Molecular Research in Three-Dimensional Model Systems for Pharmacological Approaches

### Message from the Guest Editors

Three-dimensional (3D) cell culture systems provide a novel method for the study of the stem cell culture and differentiation process. Stem cells are widely studied for organ repair because they are easy to obtain and have great potential for multiline differentiation. For example, epithelial stem cells can be differentiated into absorbant cells, goblet cells, Panet cells and oligodendrocytes via 3D culture, and mesenchymal stem cells with self-renewal and differentiation also have the ability to differentiate into various types of cells, including chondrocytes, bone cells, fat cells, and nerve cells under specific culture conditions. They even form simple or complex three-dimensional structures such as spheres and organoids. As such, 3D culture models can more effectively reproduce complex structures and the physiology of living tissues. The current Special Issue focuses on novel developments and trends in 3D stem cell culture models in vitro. Authors are invited to contribute original research articles and reviews to this Special Issue focusing on molecular studies related to 3D culture models and the application of stem cells in translational medicine.

### Guest Editors

Dr. Guya Diletta Marconi

Dr. Francesca Diomedea

Dr. Jacopo Pizzicannella

### Deadline for manuscript submissions

closed (31 July 2024)



## International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/si/191656](https://mdpi.com/si/191656)

*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*, 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)