

## Special Issue

# Novel Genotypes and Experimental Advances in Xenotransplantation

### Message from the Guest Editor

Xenotransplantation has emerged as a promising solution to the critical organ shortage, driven by advances in genetic engineering and preclinical models. This Special Issue explores cutting-edge developments in the field, focusing on novel genotypes and experimental methodologies that enhance transplant success. Key topics include the role of genetically modified donor organs, particularly with modifications targeting immune compatibility and oxidative stress regulation. The series will further highlight tools for evaluating xenotransplant viability in a clinically relevant setting. Studies on genetic modifications to reduce rejection mechanisms, enhance organ longevity, and optimize metabolic pathways will be featured. Additionally, research on oxidative stress mechanisms in xenotransplantation will be discussed, with a focus on genes that regulate inflammatory and stress responses in donor and recipient tissues. Other areas of interest include advances in immunosuppressive strategies, novel biomarkers for xenograft function, and emerging preclinical models that bridge the gap between experimental and clinical application.

### Guest Editor

Dr. Konrad Fischer

School of Life Sciences Weihenstephan, Technische Universität München, 85354 Freising, Germany

### Deadline for manuscript submissions

30 September 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/235286](https://mdpi.com/si/235286)

*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)