

## Special Issue

# Transplant Immunology in Allogeneic Hematopoietic Stem Cell Transplantation

### Message from the Guest Editors

Allogeneic hematopoietic cell transplantation (allo-HCT) is a potentially curative therapy for hematological malignancies. However, severe life-threatening acute GVHD remains a major obstacle that affects over half of allo-HCT recipients. The pathophysiology of acute GVHD is complex, but it is well established that allo-reactive donor T lymphocytes play an important role in mediating GVHD. In addition, tissue-specific mechanisms such as tissue tolerance are increasingly recognized as important components of GVHD pathogenesis. Recently, the gut microbiome and its metabolites were shown to be important for promoting tissue homeostasis and regeneration. While GVHD is a major obstacle to allo-HCT, relapse remains the number one cause of mortality following allo-HCT for malignant disorders. The graft-versus-tumor (GVT) effect helps to prevent relapse, but this effect is tightly linked to GVHD such that GVHD treatment and prophylaxis regimens often come at the cost of increased relapse. Therefore, it is critical to find ways of treating GVHD that also preserve GVT. In this Special Issue, recent advances in the basic and clinical science of GVT and GVHD are reviewed.

### Guest Editors

Prof. Dr. Tomomi Toubai

Department of Neurology, Hematology, Metabolism, Endocrinology and Diabetology, Yamagata University Faculty of Medicine, Yamagata, Japan

Prof. Dr. Timothy Devos

Department of Hematology, University Hospitals Leuven and Department of Microbiology and Immunology, Laboratory of Molecular Immunology (Rega Institute), KU Leuven, Leuven, Belgium

### Deadline for manuscript submissions

closed (28 February 2022)



## International Journal of Molecular Sciences

an Open Access Journal  
by MDPI

Impact Factor 4.9  
CiteScore 8.1  
Indexed in PubMed



[mdpi.com/si/66293](https://mdpi.com/si/66293)

*International Journal of  
Molecular Sciences*  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[ijms@mdpi.com](mailto:ijms@mdpi.com)

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

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





# International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 8.1  
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 (Inorganic Chemistry)