

## Special Issue

# Ion Channels and Transporters: Regulation and Roles in Human Diseases

### Message from the Guest Editor

Ion channels and transporters play important roles in cellular functions in various organ systems such as nervous, cardiovascular, immune and endocrine systems and are potential therapeutic targets for treatment of their dysfunction. Ion channels and transporters modulate diverse intracellular signaling pathways involved in neuronal activity, muscle contraction, cell proliferation, differentiation, apoptosis and transcription. In addition, their regulatory proteins alter electrophysiological characteristics, cellular localization/membrane trafficking and drug sensitivity of ion channels and contribute to the functional diversity and cell-specific responses. In this Special Issue, original studies on all aspects of ion channels and transporters are welcome and in particular, molecular analyses of ion channels and transporters in multiple body systems are favorable. It will also cover the reports providing new insights into molecular mechanisms, including the transcriptional, epigenetic and post-translational regulation of ion channels and transporters and the impact of novel screening technologies on drug discovery.

---

### Guest Editor

Prof. Dr. Susumu Ohya

Department of Pharmacology, Graduate School of Medical Sciences, Nagoya City University, Mizuho-ku, Nagoya 467-8601, Japan

---

### Deadline for manuscript submissions

31 October 2026



## International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 10.0  
Indexed in PubMed



[mdpi.com/si/279630](https://mdpi.com/si/279630)

*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 10.0  
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 (Inorganic Chemistry)