

Special Issue

The Roles of Ion Channels and Transporters in Intracellular Signaling

Message from the Guest Editors

Ion channels and transporters, found in all cells, are transmembrane proteins that enable the passive flow of ions both in and out of cells or cellular organelles, following their electrochemical gradients. Proper maintenance of ion channels and transporters is critical for a range of cellular processes, such as signal transduction, neurotransmitter release, nerve impulses, muscle contraction, hormone secretion, volume regulation, growth, motility, apoptosis, and ion and water homeostasis. Dysfunction of ion channels or transporters may result in diseases of the nervous system (e.g., epilepsy), the cardiovascular system (e.g., Brugada syndrome), the respiratory system (e.g., cystic fibrosis), the endocrine system (e.g., neonatal diabetes mellitus), the urinary system (e.g., Bartter syndrome), and the immune system (e.g., Isaac syndrome).

Keywords

- ion channel
- ion transporter
- signal transduction
- mechanism
- regulation
- human disease
- treatment
- drug discovery

Guest Editors

Dr. Jinwei Zhang
Dr. Zhen Wang
Prof. Dr. Zhengqiu Li

Deadline for manuscript submissions

closed (10 July 2023)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/125701

*International Journal of
Molecular Sciences*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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)