

Special Issue

Ion Channels in Cardiovascular and Metabolic Diseases

Message from the Guest Editor

Ion channels are pore-forming proteins that exist across the plasma membrane or membranes of intracellular organelles. They are critical biomolecules that regulate cell physiology or act as drug targets. Many cellular functions are regulated by ion channels, such as the control of muscle contraction/relaxation, and hormone secretion. The dysfunction of ion channels due to mutations or abnormal gene expression can cause various diseases. There are many ion channel families, including the well studied voltage-gated Na⁺, Ca²⁺, K⁺, and Cl⁻ channels, and relatively new ion channels such as the TRP superfamily. The mechanosensitive channels, Piezo channels, aquaporins and connexins are also important in the regulation of cardiovascular function. We are pleased to invite you to submit to this Special Issue which aims to collect papers that present studies on ion channels and their implications for metabolic diseases. We encourage the submission of papers that cover molecular biology, biochemistry, biophysics, genetics, pathophysiology and pharmacology to address diverse ion channels and their significance in disease pathogenesis, channelopathies and potential therapeutics.

Guest Editor

Dr. Shang-Zhong Xu
Centre for Biomedicine, Hull York Medical School, University of Hull,
Hull HU6 7RU, UK

Deadline for manuscript submissions

31 July 2026



Biomolecules

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 9.2
Indexed in PubMed



mdpi.com/si/216673

Biomolecules
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biomolecules@mdpi.com

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





Biomolecules

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 9.2
Indexed in PubMed



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



About the Journal

Message from the Editorial Board

Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

Editors-in-Chief

Prof. Dr. Peter E. Nielsen

Department of Cellular and Molecular Medicine, Faculty of Health and Medical Sciences, University of Copenhagen, Blegdamsvej 3C, DK-2200 Copenhagen, Denmark

Prof. Dr. Lukasz Kurgan

Department of Computer Science, Virginia Commonwealth University, Richmond, VA 23284, USA

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, MEDLINE, PMC, Embase, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Biochemistry)