



Current Advances in ABC Transporters in Physiology and Disease

Guest Editor:

Dr. Hiroshi Nakagawa

Department of Applied Biological
Chemistry, Graduate School of
Bioscience and Biotechnology,
Chubu University, Kasugai, Japan

Deadline for manuscript
submissions:

closed (31 March 2025)

Message from the Guest Editor

Dear Colleagues,

ATP-binding cassette transporters are critical for transporting various endogenous metabolites such as bile acids, sterols, lipids, peptides, and exogenous molecules such as antibiotics, toxins, and drugs. Several studies in this field have revealed that several genes encoding these transporters are mutated in human diseases, several of which contribute to multidrug resistance in cancer chemotherapy, and that single nucleotide polymorphisms in these genes determine the pharmacokinetics of various drugs and contribute to the development of various diseases. This Special Issue aims to present recent original research and review manuscripts that contribute to the understanding of ABC transporters, from their structure to their impact on human physiology, disease, and genetic variation, including the pathogenesis of multifactorial disorders such as metabolic diseases, drug pharmacokinetics, and multidrug resistance in cancer chemotherapy. This topic should enhance our understanding of ABC transporters, and pave the way for alternative therapeutic strategies and the development of preventive, diagnostic, and therapeutic approaches for some diseases.





an Open Access Journal by MDPI

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

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.

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, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Biochemistry)

Contact Us

Biomolecules Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/biomolecules
biomolecules@mdpi.com
X@Biomol_MDPI