Special Issue

Structural and Functional Insights into Metalloantibiotics

Message from the Guest Editor

Metalloantibiotics are a distinctive class of antimicrobial agents characterized by the presence of metal ions as integral components, which may include natural and synthetic metal complexes in a broad context. The structural architecture of metalloantibiotics. encompassing the coordination sphere, ligand types. and molecular geometry, plays a pivotal role in determining their specificity, potency, and broad biological activities. Functional studies have revealed that metalloantibiotics act through diverse pathways, including disruption of microbial cell membranes, inhibition of key enzymatic processes, interference with the synthesis of nucleic acids, proteins, and cell wall, and modulation of redox homeostasis within pathogens. Any Submissions of manuscripts regarding structural and functional studies of natural metalloantibiotics and studies of synthetic metalloantibiotics with significant biological, pharmacological, and toxicological aspects are welcome.

Guest Editor

Prof. Dr. Li-June Ming

Department of Chemistry, University of South Florida, Tampa, FL 33620, USA

Deadline for manuscript submissions

30 April 2026



Biomolecules

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 9.2
Indexed in PubMed



mdpi.com/si/257326

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

mdpi.com/journal/biomolecules





Biomolecules

an Open Access Journal by MDPI

Impact Factor 4.8 CiteScore 9.2 Indexed in PubMed



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, CAPlus / SciFinder, and other databases.

Journal Rank:

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

