

Special Issue

New Insights into Essential Genes and Functions

Message from the Guest Editors

The “omics” era has led to interesting new opportunities for the functional study of genomes. However, an outstanding overview of recent progress in this field is lacking. While scientific disciplines have become increasingly sectorial, the link between them is often underestimated. This Special Issue, “New Insights into Essential Genes and Functions”, aims to address that gap through covering ‘essential genes and functions’ and their condition dependency. The expression of phenotypic traits, indeed, depends on various factors, including their genetic background, environment, biological rhythms, tissue, cell types, health status, and combination. In this respect, we would like to invite original research papers and review articles dealing with the aforementioned issue from analytical, methodological, computational, biological, and evolutionary point of views, applied either to eukaryotes or prokaryotes. We welcome all contributions advancing our understanding of essential biological processes and genes, through innovative strategies, for functional interpretation of next-generation genomic data. We look forward to receiving your contributions.

Guest Editors

Dr. Marcella Vacca

Institute of Genetics and Biophysics “A. Buzzati Traverso”, CNR, Via Pietro Castellino, 111, 80131 Naples, Italy

Dr. Ilaria Granata

High Performance Computing and Networking Institute, National Research Council of Italy, Via P. Castellino, 111, 80131 Napoli, Italy

Deadline for manuscript submissions

closed (10 June 2025)



Biomolecules

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 9.2
Indexed in PubMed



mdpi.com/si/150063

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)