Special Issue

Application of Omics in Virus Research

Message from the Guest Editor

The interactions between the host and the virus play vital roles in inhibiting virus infections or causing pathogenic changes in the host. However, these interactions are complex and form an extensive interactive network. Therefore, the analysis of a single biomolecule or protein is not very useful for studying the pathogenic and infection mechanisms of viruses. Omics, including genomics, proteomics, metabolomics, transcriptomics, and immunomics, offer new perspectives for exploring the pathogenesis of human or animal diseases by analyzing large amounts of data that represent an entire set of some kind, especially an entire set of molecules, such as proteins, lipids, or metabolites, in a cell, organ, or organism. In recent decades, significant progress has been made in elucidating the pathogenicity and infection of viruses through omics research. In this Special Issue, we aim to present the latest data and papers on the application of omics in virus research. Articles that integrate omics analysis with experimental verification are especially well-suited for this Special Issue. We welcome both original research articles and reviews.

Guest Editor

Prof. Dr. Linzhu Ren

College of Animal Sciences, Jilin University, Changchun 130062, China

Deadline for manuscript submissions

closed (31 May 2025)



Microorganisms

an Open Access Journal by MDPI

Impact Factor 4.2 CiteScore 7.7 Indexed in PubMed



mdpi.com/si/202471

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

mdpi.com/journal/microorganisms





Microorganisms

an Open Access Journal by MDPI

Impact Factor 4.2 CiteScore 7.7 Indexed in PubMed



About the Journal

Message from the Editor-in-Chief

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

Editor-in-Chief

Dr. Nico Jehmlich

Department of Molecular Toxicology, UFZ-Helmholtz Centre for Environmental Research, 04318 Leipzig, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, PubAg, CAPlus / SciFinder, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Microbiology) / CiteScore - Q1 (Microbiology (medical))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.2 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).

