Special Issue

Viroinformatics and Viral Diseases

Message from the Guest Editor

As a result of the availability of high-throuput RNA or small RNA sequening data sets, viroinformatics is revolutionizing the way we study, understand, track, and manage viral diseases. This Special Issue includes cutting-edge applications of viroinformatics in viral surveillance, pathogenesis studies, virus evolution, characterization of genome-wide variation, drug/vaccine design, the emergence of new variants, and outbreak modeling. Big data, machine learning, artificial intelligence, structural bioinformatics, or phylogenetic approaches can be applied to address emerging/re-emerging viruses. Relevant topics include viral sequence analysis using DNA, RNA, or siRNA; host–pathogen interaction networks; diagnostic innovations; and AI-driven therapeutic discovery. By bridging computational science and experimental virology, it may accelerate solutions for global viral threats and foster interdisciplinary collaboration among virologists, evolutionary biologists, bioinformaticians, and public health researchers.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Viruses (ISSN 1999-4915) is an open access journal which provides an advanced forum for studies of viruses. It publishes reviews, regular research papers, communications, conference reports and short notes. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. The full experimental details must be provided so that the results can be reproduced. We also encourage the publication of timely reviews and commentaries on topics of interest to the virology community and feature highlights from the virology literature in the 'News and Views' section.

Electronic files or software regarding the full details of the calculation and experimental procedure, if unable to be published in a normal way, can be deposited as supplementary material.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.6 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the first half of 2025).