

Special Issue

Host Responses to Virus Infection

Message from the Guest Editors

This discussion focuses on the responses of host cells to viral infections, particularly the role of cytokines. While cytokines can have beneficial effects in preventing viral spread and expelling the virus, inappropriate responses can lead to devastating consequences for the host.

Type I interferons (IFNs), such as IFN- α and IFN- β , type II IFN (IFN- γ), and other cytokines play crucial roles in activating the intracellular molecules that inhibit viral replication within the cells. These cytokines are secreted extracellularly to recruit immune cells.

Proper immunological responses to viruses are regulated not only by primary immune cells, such as dendritic cells, T cells, and B cells, but also by the local cytokine environment created by infected cells and immune cells. We will discuss how to harness host reactions to viral infections for effective vaccination and possible preventive measures against fatal cytokine storms.

This Special Issue seeks manuscripts that enhance our understanding of host reactions to viral infections and contribute to the development of efficacious vaccination methods and potential preventive measures against fatal cytokine storms.

Guest Editors

Dr. Hideki Hayashi

Center for Medical Innovation, Nagasaki University, Sakamoto 1-7-1, Nagasaki 852-8588, Japan

Dr. Yoshinao Kubo

Department of Clinical Medicine, Institute of Tropical Medicine, Nagasaki University, Nagasaki 852-8523, Japan

Deadline for manuscript submissions

20 October 2025



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/219388

*International Journal of
Molecular Sciences*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
ijms@mdpi.com

[mdpi.com/journal/
ijms](https://mdpi.com/journal/ijms)





International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



[mdpi.com/journal/
ijms](https://mdpi.com/journal/ijms)



About the Journal

Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences,
Sez-Biochimica, Faculty of Medicine, Università Politecnica delle
Marche, Via Ranieri 65, 60100 Ancona, Italy

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, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

Journal Rank:

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