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Host–Viral Protein Interactions and Post-translational Modifications in Viral Infections

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Deadline for manuscript submissions:
31 August 2024

Message from the Guest Editor

Dear Colleagues,

Viruses require host factors for infection, replication, and assembly. Genome-wide studies have identified host factors as critical for virus growth. Post-translational modifications (PTMs) like phosphorylation, ubiquitylation, and SUMOylation are crucial for many virus life cycles. For example, Ebola, CMV, and EMCV utilize SUMOylation to inhibit antiviral immunity. SARS-CoV-2 also inhibits host IFN signaling to repress the immune response. Viral infections can manipulate host factors, e.g., HSV-1 decreases modification of 100+ cellular proteins, including antiviral PML bodies. Therapeutics targeting host-virus interactions could present effective and broad-spectrum treatments, as seen with methylprednisolone and rSIFN-co. Comprehensive understanding of host-virus interactions and modifications would improve knowledge and approaches against viral infections.

Dr. Jiayu Liao
Guest Editor

Keywords:

- host–virus interactions
- protein post-translational modifications
- viral manipulation of host immune system
- therapeutics targeting host–viral interactions

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Message from the Editor-in-Chief

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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.

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Journal Rank: JCR - Q2 (*Virology*) / CiteScore - Q1 (Infectious Diseases)

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