Special Issue

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

Message from the Guest Editor

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.

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

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.

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