



viruses



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Plant Viral Translation and Resistance

Guest Editors:

Dr. Aurelie Rakotondrafara

Department Plant Pathology,
University Wisconsin – Madison,
Russell Laboratories, 1630 Linden
Drive, Madison, WI 53706, USA

Prof. Dr. W. Allen Miller

Department of Plant Pathology
and Microbiology, Iowa State
University, Ames, IA 50011, USA

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Message from the Guest Editors

While viruses encode key proteins required to replicate their genomes, they do not encode components of the translation machinery. Consequently, they are completely dependent on the host cellular machinery for the synthesis of their proteins. To successfully compete against cellular mRNAs for ribosomes and translation factors, plant viruses have evolved a variety of unconventional strategies. These tactics include circumventing the requirement for a 5' cap and/or a 3' poly(A) tail, relying on alternative sequences in their untranslated and/or coding regions, utilizing virally-encoded proteins, or modifying cellular protein functions to favor their own translation; often at the expense of plant fitness or health. The viral dependency on host cellular proteins and/or apparatus to go through every step of their life cycle -from translation to replication, packaging, movement and transmission - provides unique opportunities to devise resistance against these plant viruses.

This Special Issue focuses on understanding these varied translational mechanisms and how this knowledge can be used to develop innovative crop protection strategies targeting viral translational requirements.



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Special Issue



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Editor-in-Chief

Dr. Eric O. Freed

Director, HIV Dynamics and
Replication Program, Center for
Cancer Research, National
Cancer Institute, Frederick, MD
21702-1201, USA

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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Viruses Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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