



Plant Viral Translation and Resistance

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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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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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