Special Issue

Functional and Structural Features of Viral RNA Elements

Message from the Guest Editor

The outcome of viral infections including evasion from the immune system and pathogenicity can be regulated by multiple post-transcriptional mechanisms such as splicing, mRNA stability, mRNA export, translation initiation and mRNA modification or editing. The corresponding viral RNA sequences must therefore provide the structural and sequence determinants required for this process. Well-characterized examples are the internal ribosome entry site (IRES), for cap-independent protein translation first identified in Picornaviruses, or the RRE element required for the efficient export of HIV mRNAs. The current Special Issue addresses recent advances in unraveling the structural motifs contributing to the functionality of such viral cis-regulatory RNA sequences and the molecular mechanisms and host factors involved their mode of action. It further aims at a better understanding of the evolution of these regulatory elements for facilitating the prediction of sequences with similar functions in other viral genomes.

Guest Editor

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