Special Issue

Viral Proteases in Viral Infection and Drug Development

Message from the Guest Editors

Proteases are commonly expressed by various viruses, and viral proteases were initially believed to be required for viral protein processes. Increasingly more studies have since revealed that most viral proteases also cleave host proteins, benefiting viral replication, modulating the immune response, and determining viral pathogenesis. For instance, NSP3, the papain-like protease expressed by SARS-CoV-2, cleaves IRF3, which dulls the antiviral immunity mediated by Type-I interferons.

This Special Issue will focused on the following four points: (1) mutation and evolutionary features of viral proteases expressed by viruses and their impact on viral pathogenesis and transmissibility; (2) novel molecular mechanisms of viral proteases expressed by pathogenic viruses affecting viral infection, immunity, and pathogenesis, especially for epidemic or pandemic viruses; (3) database and algorithm for the prediction of cleavage sites targeted by viral proteases and their interactive networks with host proteins; and (4) strategies for drug development targeting viral proteases.

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"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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