



## Oncolytic Mechanisms of Viruses: Effect on Tumor Cells and Role of the Tumor Microenvironment

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### Message from the Guest Editors

**VIRAL ONCOLYSIS** is the ability of a virus to selectively replicate and induce cell death in tumor cells as well as spread within a tumor due to the release of new virions and the action of specific viral gene products. Such **ONCOLYTIC VIRUSES (OVs)** can exert their functions with different mechanisms that can be distinguished between primary (i.e., direct virus-induced cytolysis and/or apoptosis) and secondary ones. The latter include a wide range of events leading to tumor cell death, such as modulation of the anti-viral and anti-tumoral immune responses, changes in the organization of the tumor-associated extracellular matrix, affecting invasiveness inducing the so-called Mesenchymal to Epithelial Transition (MET), and alterations of the tumor-associated vasculature and angiogenesis. This **SPECIAL ISSUE** will cover viral oncolysis and aims to enhance current knowledge of the interaction between oncolytic viruses and different types of tumor cells and address the mechanisms by which oncolytic viruses trigger the immune system against tumors or drive the tumor microenvironment (TME) to significant changes.





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## Message from the Editor-in-Chief

The worldwide impact of infectious disease is incalculable. The consequences for human health in terms of morbidity and mortality are obvious and vast but, when infections of animals and plants are also taken into account, it is hard to imagine any other disease that has such a significant impact on our lives—on healthcare systems, on agriculture and on world economics. *Pathogens* is proud to continue to serve the international community by publishing high quality studies that further our understanding of infection and have meaningful consequences for disease intervention.

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