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# Modeling the Unholy Trinity of Pandemics: Viral Infection, Immunity, and Virus Transmission

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Deadline for manuscript submissions:

31 May 2024

## **Message from the Guest Editors**

Dear Colleagues,

COVID-19 demonstrated the significant impact that viral infections can have on our society. While infected-cases forecasting was of major interest during the pandemic, epidemic models neglected to incorporate three major components: host-pathogen dynamics, the respective immunity, and the potential to be transmitted to other hosts. This Special Issue aims to advance our holistic understanding of these three lines; while it is mainly focused on innovative mathematical modeling ideas and in vivo experiments of SARS-CoV-2, papers covering any other viruses that enable us to advance our holistic knowledge of these three components are very welcome.

Dr. Esteban A. Hernandez-Vargas Dr. Julia Boehme Dr. Jason Shoemaker

Guest Editors







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## **Editor-in-Chief**

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## **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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