Special Issue

From Commensal to Pathogen: The Dynamics of Host-Microbiome Interactions

Message from the Guest Editor

This Special Issue, "From Commensal to Pathogen: The Dynamics of Host-Microbiome Interactions," focuses on understanding how microbial communities—spanning bacteria, fungi, and viruses—interact with the host to influence health and disease. It aims to bring together research on both single-kingdom and multi-kingdom microbiome analyses, highlighting how individual or combined microbial taxa contribute to immune regulation, infection susceptibility, inflammation, and disease progression. The scope of this issue includes studies employing experimental, computational, and epidemiological approaches to characterize microbiome dynamics and their impact on host physiology. We particularly encourage integrative and longitudinal studies leveraging multi-omics technologies, as well as those examining ecological transitions from commensalism to pathogenicity and their implications for population health. This Special Issue invites researchers to contribute original research articles, reviews, and communications that advance our understanding of the host-microbiome interface.

Guest Editor

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Deadline for manuscript submissions

20 July 2026



Pathogens

an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 6.8 Indexed in PubMed



mdpi.com/si/260669

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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.

Editor-in-Chief

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