

Special Issue

Molecular Epidemiology and Bioinformatics in Pathogen Surveillance

Message from the Guest Editor

This Special Issue aims to highlight recent methodological and applied advances in molecular epidemiology and bioinformatics that enhance pathogen surveillance across human, animal, and environmental contexts. The topic aligns closely with the journal's scope by emphasizing innovative analytical frameworks, genomic data interpretation, and translational applications that inform public health, microbiology, and infectious disease research. The goal is to assemble a focused yet diverse collection of at least ten high-quality contributions that demonstrate how molecular and computational tools are transforming surveillance strategies. Original research articles and reviews are welcome. Suggested themes include pathogen genomics and phylogenetics, genomic epidemiology of outbreaks, bioinformatic pipelines for surveillance, antimicrobial resistance monitoring, viral and bacterial evolution, metagenomic approaches, data integration across surveillance systems, and challenges in real-time analysis and data sharing. Together, these contributions will provide a comprehensive overview of current advances and future directions in pathogen surveillance.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

"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.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.5 days after submission; acceptance to publication is undertaken in 3.3 days (median values for papers published in this journal in the first half of 2026).