

Special Issue

Advances in Microbial Genomics: Insights from Whole Genomes and Metagenomes

Message from the Guest Editor

We invite submissions to this Special Issue, which highlights pioneering research on microbial evolution, genome adaptation, and gene acquisition across diverse environments. Recent progress in next-generation sequencing and computational methods has greatly improved our ability to unravel genetic/epigenetic variations, structural variations, and horizontal gene transfer—even in complex microbial communities—providing key insights into the mechanisms shaping microbial diversity and adaptation.

This Special Issue welcomes original research articles and reviews focusing on computational/experimental approaches to microbial adaptation and evolution.

Topics of interest include (but are not limited to):

- High-resolution variant calling in microbial genomes and metagenomes;
- Gene acquisition and horizontal gene transfer in microbial evolution;
- Comparative genomics for tracking evolutionary trajectories;
- Impacts of genetic variation on microbial adaptation and antibiotic resistance;
- Development of novel bioinformatics tools for evolutionary genomics analysis.

Guest Editor

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Message from the Editor-in-Chief

The *International Journal of Molecular Sciences (IJMS)* is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, and molecular biophysics. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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