Special Issue

Bacterial Genetics and Antibiotic Resistances

Message from the Guest Editors

Natural selection causes DNA to evolve, which plays a significant role in the emergence of antibiotic resistance. To adjust to antibiotic pressure, bacteria employ several strategies. Thus, understanding the genetics and molecular mechanism of antibiotic resistance is essential for tackling drug-resistant superbugs, developing new antimicrobial strategies and implementing effective surveillance and stewardship initiatives.

This Special Issue provides a platform to publish their research on the role of bacterial genetics in drug resistance development. It will publish reviews and research articles on topics such as the following:

- Exploration of genomics and gene function of drug-resistant bacteria to understand mechanisms of drug resistance development;
- Genetic interactions and network of drug resistance genes;
- Analysis of mutations causing genetic and phenotypic variations contributing to drug resistance;
- Epigenetics and gene expression profiling in response to antimicrobials and identification of novel drug targets;
- Novel antibacterial strategies targeting gene function and the development of drug resistance in bacteria.

Guest Editors

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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.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 20 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).

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