



antibiotics



Special Issue Reprint

Genomic Characterization of Antimicrobial Resistance and Evolution Mechanism of Bacteria

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In the ever-evolving battle against antimicrobial resistance (AMR), our understanding of the genomic landscape of bacteria and their mechanisms of evolution has become pivotal. In bacteria, resistance to antibiotics is determined by genetic factors such as chromosomes, plasmids or other movable genetic elements. Although antimicrobial resistance genes (ARGs) typically exhibit significant sequence variability, such as the impact of different concentrations of antibiotics on their genomic dynamics, the impact of this diversity on AMR is still unclear. Therefore, understanding the dynamic changes and mobilization of antibiotic resistance genes in humans, animals, plants and environmental microorganisms through genomics and metagenomics methods is crucial.

This Special Issue seeks to foster a comprehensive understanding of the genetic underpinnings of bacterial antimicrobial resistance and the evolutionary dynamics that underlie these adaptations.



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