Special Issue

Genetic Characterization of Antimicrobial Resistance under the One Health Approach

Message from the Guest Editors

Antimicrobial resistance (AMR) is a critical global concern exacerbated by the misuse and overuse of antimicrobials in human medicine, agriculture, and veterinary practices. This has led to the emergence and spread of resistant pathogens. AMR genes can be transferred between humans, animals, and the environment, demanding unified efforts and integrated approaches, such as those proposed under the One Health concept. The genetic characterization of AMR involves identifying and analyzing the genetic elements that confer resistance to antimicrobial agents in microorganisms. This process helps us to understand the mechanisms of resistance, track the spread of resistant genes, and develop strategies to combat AMR. Combining genetic characterization with the One Health approach enhances our ability to track and control the spread of resistance. This synergy ensures that interventions are effective across all domains, preserving the efficacy of antimicrobials for future generations. Together, these concepts provide a robust framework for understanding and addressing the complex challenge of AMR, ensuring a coordinated and informed response to this global threat.

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Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supra-governmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciples are all key. *Antibiotics* is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

Editor-in-Chief

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