Special Issue

Antibiotic Resistance in Agricultural Environments: Emergence, Drivers and Mitigation

Message from the Guest Editors

The emergence and spread of antibiotic resistance (AMR) in agricultural environments poses a significant threat to both veterinary and public health. Excessive use of antibiotics in intensive farming practices has long been recognized as a key driver of AMR. However, increasing evidence implicates the role of non-antibiotic stressors in the co-selection and persistence of antibiotic-resistant bacteria (ARB) and antibiotic resistance genes (ARGs) in various ecosystems. Agricultural environments serve as hotspots and important reservoirs of horizontal gene transfer, facilitating the dissemination of diverse resistance determinants like ARGs across microbial communities. Thus, this Special Issue invites submissions that further our understanding regarding the ecological and evolutionary dynamics of AMR in animal-associated microbiomes. Topics include the impact of selective pressures from antibiotics and non-antibiotics on AMR dynamics; mechanistic insights into the emergence, persistence, and dissemination of ARB and ARGs in animal-associated environments; innovative strategies for mitigation and improved surveillance under a One Health Framework; etc.

Guest Editors

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Deadline for manuscript submissions

31 December 2025

Antibiotics

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.7
Indexed in PubMed

mdpi.com/si/242138

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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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