Special Issue

Antibiotics in the Environment: Sources, Fate, and Mitigation Strategies

Message from the Guest Editor

Antibiotic contamination in the environment is an urgent challenge with far-reaching implications for both ecological balance and public health. The relentless influx of antibiotics into our ecosystems—stemming from agricultural runoff, wastewater discharges, and industrial practices—creates a complex web of environmental contamination that disrupts natural processes and fosters the spread of antibiotic-resistant genes. This Special Issue aims to dissect the multifaceted journey of antibiotics from their sources to their environmental fate, examining their persistence, degradation, and transport mechanisms across various matrices such as soil, water, and sediments. We seek to unravel how these contaminants impact microbial communities, wildlife, and human health and explore innovative strategies for their mitigation. By addressing these critical aspects, we hope to provide a comprehensive understanding of the problem and propose effective solutions to curtail antibiotic pollution. Manuscripts that contribute to novel detection methods, advanced treatment technologies, and policy interventions are especially encouraged.

Guest Editor

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Deadline for manuscript submissions

31 March 2026

Antibiotics

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.7
Indexed in PubMed

mdpi.com/si/214378

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About the Journal

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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