Special Issue

Challenges of Antibiotic Resistance: Biofilms and Anti-Biofilm Agents

Message from the Guest Editors

Antibiotic resistance is a global health crisis, as the rise in antibiotic-resistant bacteria has significantly increased the number of deaths each year because infections are becoming increasingly difficult to manage. This resistance is attributed to the overuse and misuse of antibiotics and microorganisms' ability to form biofilms, which is a significant problem in several sectors. Biofilms are complex communities of microorganisms embedded in a self-produced matrix of extracellular polymeric substances composed of carbohydrates, proteins, lipids, and extracellular DNA. This complex structure protects microorganisms from the action of antibiotics, as well as other environmental stresses. This resilience makes biofilms a critical factor in the growing challenge of antimicrobial resistance. In this sense, there is a need to find new antibiofilm agents that inhibit biofilm development and contribute to reducing bacterial antibiotic resistance. This Special Issue invites researchers to publish studies regarding new antibiofilm agents and their impacts on biofilms, virulence factors, and antibiotic resistance mechanisms.

Guest Editors

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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.

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