Special Issue

New Inhibitors for Overcoming Antimicrobial Resistance

Message from the Guest Editors

Antimicrobial resistance (AMR) is a serious public health problem. Infections caused by multidrug-resistant strains often require prolonged hospitalization, combined antibiotic therapy, and intensive care, placing a heavy burden on health systems. Several mechanisms contribute to AMR, such as efflux, reduced permeability, enzymatic degradation/modification, and target modification or protection. Biofilms are complex bacterial communities that also play a role in resilience to antibiotic therapy. Inhibitors of these mechanisms, e.g., efflux inhibitors, could be potential therapeutic agents when combined with antimicrobials, recovering their efficacy against MDR strains. This Special Issue highlights recent developments in AMR inhibitors from natural or synthetic sources, with a particular focus on efflux and related resistance mechanisms. We welcome studies on new compounds or repurposed drugs as potential inhibitors. Reviews and studies characterizing efflux systems in bacteria, fungi, and protozoa, as well as the interplay between efflux and other resistance mechanisms, are also appreciated. Studies on inhibitors of other mechanisms are also welcome.

Guest Editors

Dr. Humberto Medeiros Barreto

Department of Parasitology and Microbiology, Federal University of Piauí, Teresina, Brazil

Dr. Sofia Santos Costa

Unit of Medical Microbiology, Institute of Hygiene and Tropical Medicine, NOVA University Lisbon, Lisbon, Portugal

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Antibiotics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
antibiotics@mdpi.com

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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

Prof. Dr. Nicholas Dixon
School of Chemistry and Molecular Bioscience, University of Wollongong, Wollongong, NSW 2522, Australia

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