



New Beta-Lactamase Inhibitors Research and Development: Sword for Antimicrobial Resistance

Guest Editor:

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Message from the Guest Editor

The evolution and spread of β -lactamases in Gram-negative bacteria present challenges in the treatment of many infections for which β -lactams are employed. The combination of a β -lactam (BL) with a β -lactamase inhibitor (BLI) is a proven strategy to address this problem. In recent years, there have been efforts to design novel BLIs and to repurpose older drugs in novel therapeutic combinations. Although a number of new BL/BLI preparations are entering clinical application, these are already compromised by the emergence of resistance. Most also lack useful activity against key MDR pathogens and do not inhibit the metallo- β -lactamases (NDM, IMP, VIM) responsible for carbapenem resistance. In this Special Issue, we seek manuscripts that review or provide insights into the development or repurposing of novel or existing BL/BLI combination therapies. This may include articles on chemical and biochemical activity, the mechanisms of genotypic and phenotypic resistance, regional epidemiological surveillance studies, in vitro susceptibility testing and diagnostics, PK/PD analyses and dosing strategies, clinical outcome studies and case reports.





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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 disciplines 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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