

Special Issue

Development of Active Compounds to Combat Antibiotic Resistant Microorganisms

Message from the Guest Editors

Currently, despite the broad spectrum of antimicrobial compounds, bacterial infections are among the leading causes of death. Moreover, infections resulting from multidrug-resistant bacteria (MDR) strains are an increasing problem in modern medicine. Due to bacterial resistance and a limited possibility of new antibiotic breakthrough, we are inevitably faced with further development of new therapeutic methods to combat human bacterial pathogens. The mechanisms of bacterial resistance are diverse and include such defense mechanisms as drug enzymatic degradation, removal of compound with the use of pumps (active transport), modifications of drug-target sites of action, or creation of an alternative metabolic pathway. To address the Special Issue of treating bacterial infections, we are searching for new antibiotics, natural-occurring antibacterial compounds, e.g., plant secondary metabolites or peptides, synthetic substances, e.g., metal nanoparticles, and combining antibacterial substances and/or therapies aimed at obtaining a synergistic effect to prevent bacterial resistance.

Guest Editors

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