



Cationic Nanoparticles: Options to Replace Antibiotics against Multi-Drugs Resistant Pathogens

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Message from the Guest Editors

Multidrug-resistant pathogens, often responsible for severe and incurable infections, are a worldwide concern urgently requiring efforts to find new treatment options. Both Gram-negative and Gram-positive bacilli are emerging as clinically relevant superbugs, often sensitive only to certain natural cationic antimicrobial peptides (AMPs) capable of lethally interacting with bacterial membranes and killing them rapidly, regardless of their drug resistance. More stable and low-cost cationic macromolecules, mimicking AMPs, are continuously synthesized and tested on various pathogenic bacterial species, with the aim of reducing the incidence of fatal infections in both the general population and fragile individuals.

This special issue aims to include articles and reviews on cationic antimicrobial materials and structural strategies to improve their antibacterial activity, selectivity, carrying capacity, as well as studies investigating molecular mechanisms of action. Furthermore, studies of formulations of the developed agents, characterized by antibacterial activity and low cytotoxicity towards mammalian cells, will be welcome.





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Message from the Editor-in-Chief

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