Special Issue

New Antibacterial Nanostructured Coatings for Biomedical Applications

Message from the Guest Editor

Dear Colleagues Bacterial colonization on biomedical devices, together with the worrisome problem of antibiotic resistance, arouse interest in the development of anti-infective materials. Among the promising applications, engineered antibacterial nanostructured coatings represent an innovative perspective in the field of biomedical application. These nanostructured coatings can be mainly categorized into organic, which are implicated in drug delivery, and inorganic, which cause free-radical stress in bacteria. Other approaches in combination with nanostructured coatings, such as antimicrobial peptides, antimicrobial oligonucleotides, and natural compounds, are encouraged. Indeed, modern medicine has rediscovered natural resources and relies on their different molecular backgrounds to recognize molecules with antimicrobial properties. These molecules could be used in nanocoating technologies for medical devices, for food nano-packaging, and in the green synthesis of nanoparticles.
Keywords: antibacterial nanostructured coatings; medical devices; biomaterials; physicochemical haracterization; antibacterial mechanisms

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Deadline for manuscript submissions

closed (30 November 2022)

Antibiotics

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 7.3
Indexed in PubMed

mdpi.com/si/81728

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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.

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