Special Issue

Biofilms and Implantable Device-R

Message from the Guest Editor

Implantable medical devices have revolutionized modern medicine by improving patient outcomes and quality of life. However, the increased use of devices such as catheters, prosthetic joints, and orthopedic hardware has led to a corresponding rise in device-associated infections. A major contributor to these infections is the formation of microbial biofilms—complex communities of microorganisms that adhere to surfaces and are embedded in a protective extracellular matrix. Biofilms confer a heightened resistance to antibiotics and host immune responses, rendering conventional antimicrobial therapies largely ineffective and posing serious challenges for clinicians worldwide. This Special Issue aims to explore the multifaceted aspects of biofilms in the context of medical device infections. Topics include the molecular mechanisms of biofilm formation, pathogen identification, advances in diagnostic techniques, and the development of innovative preventive and therapeutic strategies. Special emphasis will be placed on antimicrobial coatings, novel materials, emerging technologies such as bacteriophage therapy, and strategies targeting biofilm dispersal and quorum sensing.

Guest Editor

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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

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