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, cardiovascular implants, 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. 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

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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