Special Issue

Treatments Against Microorganisms of the Oral Cavity

Message from the Guest Editor

The oral cavity hosts a diverse microbiota, some of which are responsible for significant infectious diseases; therefore, effective treatment against these microorganisms is essential to preventing and managing conditions such as dental caries, periodontal disease, oral candidiasis, osteomyelitis, and medication-related osteonecrosis of the jaws (MRONJ). These pathogens often possess the ability to form complex biofilms, which act as protective barriers and substantially reduce the efficacy of conventional antimicrobial therapies.

Current treatment approaches include the mechanical removal of biofilms, the use of antimicrobial agents, antifungals, and, in severe cases, systemic therapies or surgical intervention. However, rising concerns surrounding antimicrobial resistance and the persistence of biofilm-embedded microorganisms underscore the need for the development of new therapeutic strategies. Emerging therapies—such as nanoparticles, photodynamic therapy, probiotics, and targeted antimicrobial peptides—are being explored as promising alternatives with enhanced specificity and reduced side effects.

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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