Special Issue

Antimicrobial Properties of Natural Substances: Alternatives for Managing Microbial Contamination

Message from the Guest Editors

Plant-derived natural substances offer promising alternatives for managing microbial contamination, particularly in a world increasingly seeking eco-friendly solutions. Essential oils, for example, have long been used for their antibacterial, antifungal, and antiviral properties. Herbal extracts also demonstrate potent antimicrobial actions. The appeal of natural substances lies not only in their effectiveness but also in their biodegradability and safety compared to synthetic chemicals. With growing concerns about antimicrobial resistance and environmental impact, these alternatives present a valuable path toward safer and more sustainable microbial contamination management, particularly in healthcare, agriculture, and food industries. Many plant extracts and essential oils have gained significant interest in preventing contamination in food due to their GRAS status. Therefore, the main subject of this Special Issue is the application of different antimicrobial plant-derived natural substances with GRAS status and their formulations in the prevention of contamination in agriculture and food.

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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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