

Special Issue

Next-Generation Antimicrobial Peptides: Mechanisms, Engineering, and Clinical Applications

Message from the Guest Editor

Antimicrobial peptides (AMPs) have successfully been applied in diverse contexts ranging from infection control to food preservation. Novel strategies in discovery, high-throughput screening, rational design, and synthetic biology are driving the emergence of next-generation peptides. The diversity of AMP mechanisms and functionality provides a promising platform to explore fundamental biology, develop new clinical solutions, and expand applications into broader fields such as nanotechnology, biomaterials, and agriculture. This Special Issue aims to highlight these advances, offering a venue for high-quality articles and comprehensive reviews that emphasise the course for AMP-based innovations. We welcome contributions covering, but not limited to, the following themes: Mechanisms of action, Discovery and design, Synthetic and biotechnological Approaches, Delivery strategies and formulation, Translational research, and Cross-disciplinary applications. This Special Issue seeks to celebrate the success of antimicrobial peptide research and its diverse applications.

Guest Editor

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About the Journal

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 disciplines 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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