

Special Issue

Antimicrobial Peptides: Biosynthesis, Molecular Mechanisms and Biomedical Applications

Message from the Guest Editors

The rapid rise of antimicrobial resistance has intensified the search for alternatives to conventional antibiotics. Antimicrobial peptides (AMPs), including bacteriocins and other ribosomally and non-ribosomally synthesized peptides, have emerged as promising candidates due to their diverse mechanisms of action, broad-spectrum activity, and potential for engineering and optimization. We are pleased to invite you to contribute to this Special Issue. It aims to highlight recent advances in the discovery, molecular characterization, and application of AMPs, in line with the journal's focus on innovative antimicrobial strategies and mechanistic insights into bioactive compounds.

Original research articles and reviews are welcome. Research areas may include (but are not limited to): AMP biosynthesis and regulation, heterologous expression systems, mechanisms of action, AI-driven peptide design, peptide engineering and stability, pharmacokinetics and pharmacodynamics, nanoformulations, and emerging applications, including anticancer and immunomodulatory activities.

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