



antibiotics



Special Issue Reprint

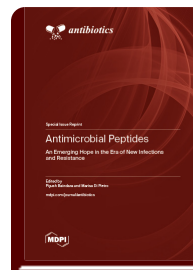
Antimicrobial Peptides: An Emerging Hope in the Era of New Infections and Resistance

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In the recent past, due to their unique properties, antimicrobial peptides (AMPs) received great attention as promising alternatives to conventional antibiotics. AMPs are naturally occurring integral components of the host defense system and are functional throughout all orders of life, ranging from prokaryotes to eukaryotes. AMPs are potent molecules with a broad spectrum of biological activities against infectious or pathogenic agents, such as bacteria, fungi, viruses, and parasites.

This Reprint covers details regarding AMPs, including the following: screening, purification, and characterization of novel AMPs; genome mining and comparative analysis of AMP-producing biosynthetic gene clusters; cloning and heterologous expression of novel AMPs; structural characterization and designing of new AMPs with potential therapeutic activities; strategies for understand the mechanisms of AMPs; standardization of AMPs' biological activities against various pathogens such as bacteria, fungi, viruses, and parasites, as well as chronic diseases like cancer and cystic fibrosis; immunomodulatory properties of AMPs and potential therapeutic applications; role of AMPs in human diseases; combination therapies of AMPs with conventional antibiotics; comparative genomics and evolutionary studies of AMPs; evolution and resistance development against AMPs; and artificial intelligence and development of novel AMPs.



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