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Katsumi Matsuzaki
Editor

Antimicrobial Peptides

Basics for Clinical Application

 Springer

Editor

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Preface

Antimicrobial peptides (AMPs) discovered about 30 years ago are responsible for part of the innate immunity of animals and plants, and almost 3000 peptides have been reported so far. Previously, AMPs were thought to possess only antimicrobial activity, but subsequent research revealed that they also exhibit various properties including immune-modulating, anticancer, antibiofilm, and cell-penetrating activities.

The emergence of multidrug-resistant bacteria and new pathogens is a threat to human health. Therefore, the development of novel antimicrobial agents is a pressing need. AMPs have been considered promising candidates for new therapeutics to combat this problem because their antimicrobial spectra are broad and the development of bacterial resistance against them is difficult compared to conventional antibiotics.

This book of 15 chapters gives an overview of AMPs, how they work, what activities they have other than antimicrobial activity, how to design and discover them, what cautions should be taken into consideration before commercialization, and examples of clinical applications. Each chapter is written by leading scientists in that field. I appreciate their contributions very much.

Now that commercial development of AMPs has been reignited, it is a good time to publish this book to celebrate the 30-year anniversary of the discovery of AMPs. I hope this book will provide scientists in both academia and industry with the basic and comprehensive knowledge needed to develop AMPs of clinical use.

Kyoto, Japan

Katsumi Matsuzaki

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