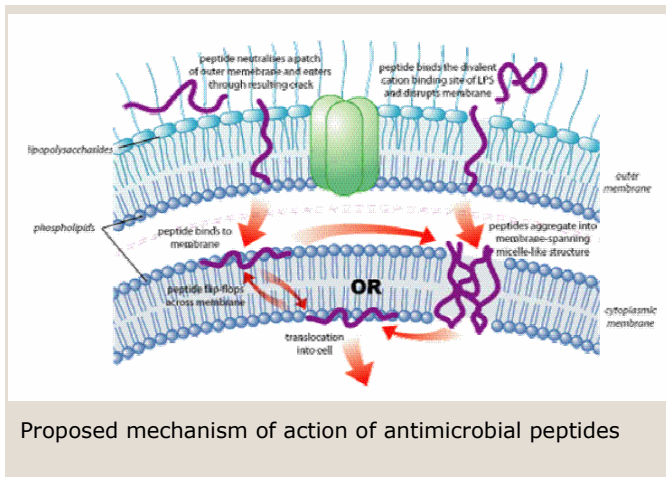


Challenge

In the last two decades the prevalence of antibiotic-resistant bacteria has increased dramatically. Multi-drug-resistant strains have emerged in many species

that cause disease in humans. Currently there are only insufficient treatments available for infections caused by many of the antibiotic-resistant bacteria. Furthermore the resistance to commonly used antibiotics is steadily increasing. In consideration of this fact alternative methods to combat antibiotic resistant bacteria are urgently needed.

Therefore the development of novel antibiotics less prone to resistance as well as resistance formation is critical and constitutes a medical need.



Technology

The present invention relates to a group of novel polypeptides derived from plants that were further optimized and show efficient antibiotic activity towards a variety of plant pathogens as well as human pathogens. The peptides comprise an amphipathic helical structure which allow them to incorporate into bacterial membranes. They are supposed to target the prokaryotic cytoplasmic membrane by membrane perforation resulting in the efflux of prokaryotic cytoplasm.

Another important feature of the present invention is the low haemolytic activity of the peptides making the compounds suitable for antibiotic use.

Commercial Opportunity

Antimicrobial peptides belong to a very old group of natural compounds that don't seem to evoke pronounced resistance formation. They might present a new generation of secure antibiotics. Moreover, the peptides show antimycotic activity as well.

- In-licensing or collaboration partnership for further development

Patent Situation

Four EP patent applications are pending.

Further Reading

Hanock & Sahl, Nat. Biotech. 2006, Vol. 24, p. 1551

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