

KEYNOTE SPEAKER

What is the nature that defines a bacteriocin's inhibitory spectrum?

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Abstract

Bacteriocins are antimicrobial peptides widely produced in the bacterial world. They are numerous and very diverse, especially in terms of composition, structure and mode of action. Most of them have quite narrow inhibition spectra, with activity mostly directed to species or genera closely related to the producers. But some has also broad inhibitory spectrum. Many bacteriocins target important pathogens such as *Listeria*, *Bacillus*, *Enterococcus*, *Staphylococcus*, etc. and these hence possess a great potential in diverse antimicrobial applications, ranging from food to medical sectors. One of the fundamental aspects in bacteriocin research is to define the nature that dictates their inhibitory spectra as knowledge from this field is very crucial to develop bacteriocins into useful and safe applications. Some important progresses in this field have been made in recent years. I will discuss about the different successful strategies and important findings, including the identification of bacteriocin receptors and the nature behind a bacteriocin's specificity.

Biography

Prof. Diep is trained as a molecular microbiologist, and have a keen interest in bacteriocin research since early 90s. He has also postdoctoral experiences on toxins from fish pathogens (*Aeromonas salmonicida*) and stem cell biology. His current research interests covers not only the fundamental aspects of bacteriocins such as biochemistry, genetics, biosynthesis, gene regulation, modes of action but also their applicative potentials in food safety (as preservatives) and in medicine (as antimicrobials). Prof Diep and his research team have also an increasing research activities with bacteriocins in diverse animal models to explore their probiotic properties. Their animal models have been, but not limited to, mice, different types of larvae, and bees.

Prof Diep have already published over 70 peer-reviewed articles and book chapters. His current H-index in the Web of Science is 29 (by December 2015).