



Hiver 2015  
**Conférence**  
au Département de chimie  
présentée conjointement avec  
PROTEO

CONFÉRENCIÈRE

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DATE

Mercredi, 18 mars 2015

TITRE

## **Insights into the Molecular Mechanism of Action of Host Defense Peptide Piscidin : One Peptide Family, Multiple Biological Roles**

RÉSUMÉ

Antimicrobial peptides are multifunctional molecules that perform vital roles to prevent and fight infections. Not only can they directly eradicate bacteria by disrupting their membranes or targeting intracellular processes but they can also have immunomodulatory effects. The multiple functions of peptides in the piscidin family, the first antimicrobial peptides to be discovered in mast cells, include antibacterial, antiviral, antifungal, anticancer, and anti-inflammatory activities. In our research, we carry out biochemical and biophysical experiments to investigate piscidin's molecular targets and mechanisms of action in bacterial and cancer cells, and their respective mimics. Using an array of tools that include high-resolution solid-state NMR, neutron diffraction, oriented circular dichroism, permeabilization assays, biological-activity testing, confocal microscopy, and molecular dynamics, we contribute to the efforts of mapping the landscape of intrinsic structural features and environmental conditions that allow a single peptide to unleash a multiplicity of functions in support of host defense.

La conférence aura lieu à 11h au **VCH-3850** du **Pav. A.-Vachon**  
*Cordiale invitation à toutes et à tous !*

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