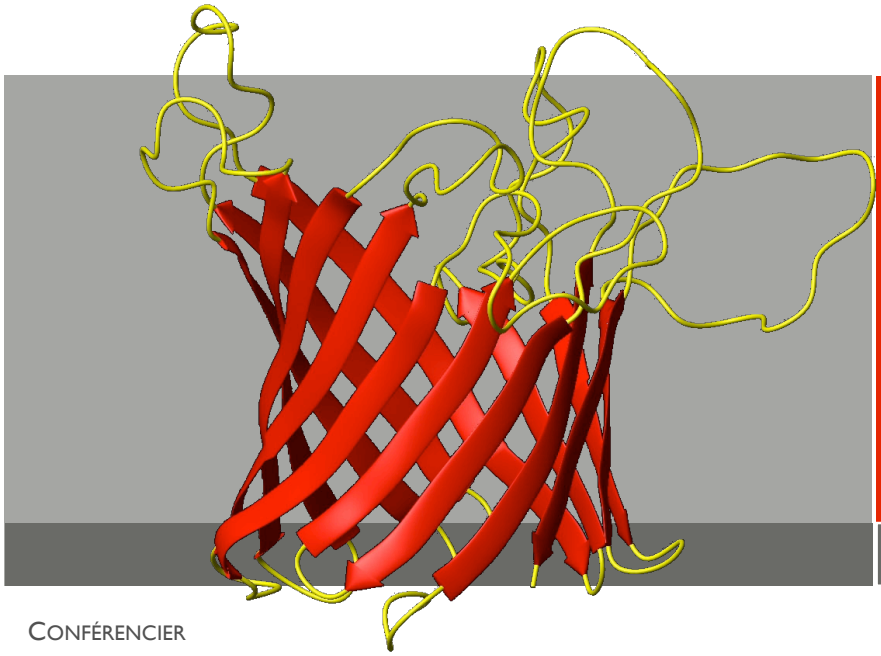

Été 2012

Conférence

au Département de chimie
présentée conjointement avec
PROTEO

CONFÉRENCIER

AYYALUSAMY RAMAMOORTHY

Biophysics and Department of Chemistry
The University of Michigan, MI

DATE

Jeudi, 16 août 2012

TITRE

Dynamical Structures of Membrane Proteins by NMR Spectroscopy

RÉSUMÉ

Membrane proteins are an exciting class of biomacromolecules and play important roles in a variety of biological processes that are directly linked to major diseases including cancer, aging-related diseases, and infectious diseases. A complete understanding of their function can only be accomplished using high-resolution structures. In spite of recent developments in structural biology, membrane proteins continue to pose tremendous challenges to most biophysical techniques. A major area of research in my group is focused on the development of NMR techniques to study the dynamic structures of membrane bound proteins such as cytochrome b5, cytochrome P450 and cytochrome P450-reductase. In my talk, I will present strategies to study the structure and dynamics of these challenging systems and also on the electron transfer mechanism that enables the enzymatic function of P450. Atomic-level resolution NMR structures of amyloidogenic proteins revealing the misfolding pathway and early intermediates that play key roles in amyloid toxicity will also be presented.

References:

Yamamoto et al, Fast NMR Data Acquisition From Bicelles Containing a Membrane-Associated Peptide at Natural-Abundance. *J. Phys. Chem. B.* **115**, 12448-12455 (2011).

Dürr et al, The cytochrome P450 and b5 and their reductases – Promising targets for structural studies by advanced solid-state NMR spectroscopy, BBA *Biomembranes* **1768**, 3235-3259 (2007).

DeToma et al, Misfolded proteins in Alzheimer's disease and type II diabetes, *Chem. Soc. Rev.* **41**, 608-621 (2012).

La conférence aura lieu **à 11h au VCH-2830** du **Pav. Alexandre-Vachon**
Un café sera servi avant la conférence. Cordiale invitation à toutes et à tous !

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