Seminar Series of the
CIHR Training Grant in

Protein Folding and Interaction Dynamics

Prof. Charles Sanders

Vanderbilt University

How Cholesterol Promotes Amyloidogenesis and Alzheimer's Disease

It is known that elevated cholesterol promotes amyloidogenesis, but the mechanism has not previously been clear. In this study the structure of the transmembrane C-terminal domain of the amyloid precursor protein (C99) was determined using NMR spectroscopy and found to have several surprising features to provide insight into how this protein is proteolytically processed in the pathway to formation of amyloid-β, which is closely associated with the etiology of Alzheimer's disease. It was also discovered that C99 is a cholesterol binding protein. Based on this and additional data, we provide a unifying model for how cholesterol promotes the amyloidogenic pathway.

Host: Dr. Scott Prosser

Thursday, April 25 - 12:00pm
Medical Sciences Building, Rm. MSB 4171
University of Toronto