Department of Chemistry
The Western University of Ontario

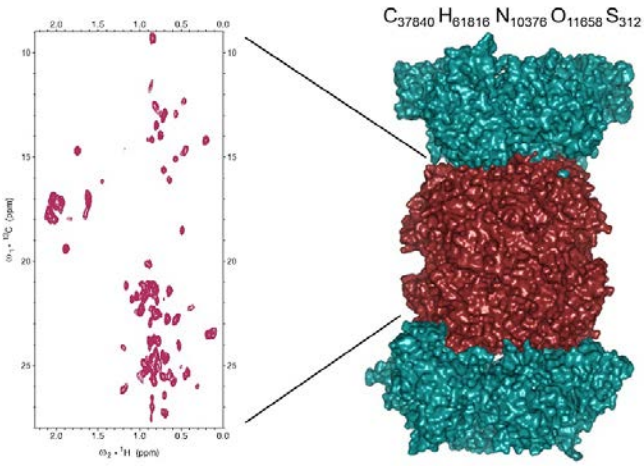
invites you to

THE PAUL de MAYO AWARD LECTURE

Dr. Siavash Vahidi

Postdoctoral Fellow at Kay Laboratory at University of Toronto's Molecular Genetics, Biochemistry, & Chemistry Departments;
Research Fellow in the Molecular Structure and Function Program at the Hospital for Sick Children

Breaking the Barrier: NMR Spectroscopy of Molecular Machines at One Mega-Dalton and Beyond



Cells employ macromolecular assemblies, so-called molecular machines, to perform a myriad of biological tasks. Gaining an atomic-level understanding of the mode of operation of these machines represents the "holy grail" of structural biology. NMR spectroscopy is a powerful method for studying the structural and motional properties of proteins with molecular weights on the order of 50 kDa. However, NMR studies of molecular machines *have* been elusive due to their extreme masses (mega-Dalton and beyond). This lecture outlines how the methyl-TROSY (transverse relaxation optimized spectroscopy) methodology breaks this barrier and enables NMR investigations of protein systems with molecular weights approaching one mega-Dalton. Advances in NMR pulse sequences and biosynthetic production of isotopically labeled proteins will be discussed. It will be shown how this emerging technique contributes to an understanding of the regulation of the bacterial protein degradation machinery.

Monday, May 16, 2016 at 2:30 pm
Room 0153, Biological & Geological Sciences Building

ACCESSIBILITY
The University of Western Ontario

If you require information in an alternate format, or if any other arrangements can make this event accessible to you,

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