



The Singapore Bioimaging Consortium (SBIC)
presents a seminar

on

**“Characterizing Protein Structure, Dynamics and Interactions in
Solution by NMR”**

Speaker: Yao Shenggen
Structural Biology Division The Walter & Eliza Hall
Institute of Medical Research 1G Royal Parade
Parkville, Australia

Date : Tuesday, 14 February 2012
Time : 2.00pm – 3.00pm
Venue : SBIC Seminar Room, 11 Biopolis Way
Level 2, Helios Building
Singapore 138667
(Please use Level 1 entrance)

Abstract

The use of NMR spectroscopy in solving biomolecular structures is well-established nowadays. In addition to the determination of protein/peptide structures, NMR provides means for detailed characterizations of many other physical properties of biomolecules in solution, such as their translational diffusion, overall rotational reorientation, and residue-specific dynamics cross a broad range of timescales. Knowledge of protein translational and rotational behavior as well as dynamics is of significant value in biophysical characterization of proteins in solution and is also of considerable importance for a better understanding of their biological functions. In this seminar, detailed studies of proteins in solution by NMR via translational diffusion and heteronuclear relaxation measurements will be presented. Rapid NMR data acquisition with the use of band-selective RF pulses will also be briefly discussed and its advantage, in particular, for proteins containing backbone amides in rapid exchange with solvent will be demonstrated.

About the Speaker

Dr Shenggen Yao obtained his PhD at The University of New South Wales, Sydney, in 1995 (thesis title: Nuclear magnetic resonance flow micro-imaging: with applications to studies of membrane filtration modules). Since then, he has participated in many research projects in the field of Biomedical Science involving the use of NMR spectroscopy and imaging. Since the beginning of his PhD at UNSW, he has co-authored a total of 47 papers covering both NMR spectroscopy and imaging. He is currently a Research Scientist within the Structural Biology Division, The Walter and Eliza Hall Institute, Melbourne.

--- Admission is free and all are welcome ---