The Singapore Bioimaging Consortium (SBIC)
presents a seminar on

"Roles of Metabolomics in Biological Research"

Speaker: **Prof Wang Yulan**
Director of Singapore Phenome Center
Professor of Metabonomics
Nanyang Technological University
Host : **Dr Han Weiping**
Date : **Wednesday, 7 November 2018**
Time : **2.00pm – 3.00pm**
Venue : **SBIC Seminar Room**
11 Biopolis Way
Level 2, Helios Building, Singapore 138667
(Please enter via Level 1)

Abstract

Metabonomics is the science that studies dynamic alterations of metabolites in a cell, organ or entire organism[1,2]. The definition of the metabonomics was first given in 1999 as "the quantitative measurement of the time-related multiparametric metabolic response of living systems to pathophysiological stimuli or genetic modification"[2]. Technically, metabonomics investigations usually consist of the collection of metabolic profiles using nuclear magnetic resonance spectroscopy (NMR) or mass spectrometry (MS) techniques and analysis of the collected data using appropriate multivariate statistical techniques. Additionally, a range of target MS assays provided quantitative changes of low concentration metabolites. In the current presentation, current available metabonomics tools and examples of metabonomics applications on infectious disease, drug resistant and neurodegenerative disease will be given.

About the Speaker

Professor Wang graduated in Chemical Engineering at Shaanxi University of Science and Technology, P.R. China in 1986 and got her PhD in Physical Chemistry in 1997 from University of East Anglia, UK. Professor Wang joined Institute of Food Research and John Inners Center, UK, during 1998-2001 for her postdoctoral research where she applied her NMR skills in food sciences. From 2001 to 2007, she worked at Imperial College London in the field of metabonomics as research fellow. She combined NMR and LC-MS spectroscopic techniques with computational modeling techniques to investigate metabolic effects of infectious diseases, nutritional interventions. In 2007, she was awarded "100 talent program" by the Chinese Academy of Science and became Professor at Wuhan Institute of Physics and Mathematics. In Aug 2018, she joined Lee Kong Chian School of Medicine at NTU and become director of Singapore Phenome Center. She focused her research in

development of metabonomics techniques, including NMR and MS-based techniques. She has applied the metabolomics technique to a number of disease areas, including infectious diseases, cancer, neurodegenerative disease and gastrointestinal tract disease, as well as drug toxicity. She had been an executive committee member of "experimental nuclear magnetic resonance conference". She is also an editorial board member of several journals, including, scientific reports, metabolomics, current metabolomics.

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