The Singapore Bioimaging Consortium (SBIC)
presents a seminar
on

"NMR Hyperpolarized Contrast Agents for Molecular Imaging"

Speaker: **Dr Eduard Chekmenev**
Associate Professor of Radiology and Radiological Sciences, Biomedical Engineering, Vanderbilt-Ingram Cancer Center
Host : **Dr Edward Robins**
Date : **Thursday, 24 November 2016**
Time : **2.00pm – 3.00pm**
Venue : **SBIC Seminar Room**
11 Biopolis Way
Level 2, Helios Building, Singapore 138667
(Please enter via Level 1)

Abstract

Hyperpolarized Magnetic Resonance is a revolutionary technique to significantly enhance nuclear spin polarization by orders of magnitude. In recent years, the advances in hyperpolarization instrumentation and imaging techniques paved the way to the clinical trials for molecular imaging of elevated glycolysis in cancer and lung function abnormalities in COPD and other lung diseases. This presentation will focus of our recent advances in (i) instrumentation for preparation of hyperpolarized contrast agents using parahydrogen and Xenon-129, (ii) developing new chemistries for preparation of hyperpolarized contrast agents to probe lung function using hyperpolarized proton MRI, elevated glycolysis in cancer, brain metabolism and pH imaging, and (iii) improving hyperpolarized MRI detection sensitivity by utilizing low-field MRI.

About the Speaker

Dr Eduard Y. Chekmenev, 1977, BS in Organic Chemistry (supervisor Prof V Shchepin) 1998, Perm State University, Perm, Russia. PhD in Physical Chemistry (supervisor Prof Richard J. Wittebort) 2003, University of Louisville, KY, USA. Postdoctoral Fellow at the National High Magnetic Field Laboratory (NHMFL) to work on structural biology of membrane proteins in Tallahassee, FL, USA (with Prof. Timothy Cross) and in NMR hyperpolarization at Caltech (with Prof. Daniel P. Weitekamp) and hyperpolarized in vivo imaging at HMRI (with Dr. Brian D. Ross). In 2009, Dr Chekmenev started his MR hyperpolarization program at Vanderbilt University Institute of Imaging Science (VUIIS), and he was tenured in 2015. In 2016, he was elected as a Professor of the Russian Academy of Sciences. Research interests include development of methods of hyperpolarization and their biomedical and industrial applications.

Admission is free and all are welcome ---