2016 UK Metabolomics Symposium

Sponsored by the Markey Cancer Center
NIH U24 Regional Metabolomics
Organized by the RCSIRM Metabolomics Group

August 6, 2016
8:00 am – 6:00 pm

University of Kentucky
Bio-Pharm Complex
Room 152
Morning Session

8:00 am  Registration
          Poster Assembly
          Continental Breakfast

8:30 am  Introduction and Welcome
          Richard M. Higashi, PhD, CESB
          Director, Mass Spectrometry for Center for Environmental & Systems
          Biochemistry (CESB), University of Kentucky (UK)

8:35 am  Overview and Welcome
          Robert S. DiPaola, MD
          Dean, UK College of Medicine

8:45 am  Session 1: Chair–Andrew Lane, PhD, CESB

Plenary Lecture:
"Hyperpolarized $^{13}$C Metabolic Imaging – From Cells to Patients"
   – John Kurhanewicz, PhD, Professor of Radiology and Biomedical Imaging,
     Urology and Pharmaceutical Chemistry; Director of the UCSF Imaging RIG
     and Biomedical NMR Lab, University of California San Francisco

9:35 am  “Exploring the Metabolome Using Hyperpolarized $^{13}$C Tracers Combined with
          Steady-State $^{13}$C NMR Isotopomer Analyses of Tissue Extracts”
   – A. Dean Sherry, PhD, Professor of Chemistry, University of Texas, Dallas

10:25 am  Break
          Poster Session

10:50 am  Session 2: Chair–Teresa Fan, PhD, CESB

"Understanding and Exploiting the Metabolic Flexibility of Cancer Cells Using Flux
Analysis”
   – Christian Metallo, PhD, Assistant Professor, Department of Bioengineering,
     University of California, San Diego

11:40 am  "Metabolic Predictors of Cancer and Cardiometabolic Disease in Human Cohorts"
   – Clary Clish, PhD, Director, Metabolite Profiling Broad Institute of MIT and
     Harvard

12:30 pm  Lunch (Pre-Registered Attendees)
          Poster Session
Afternoon Session

1:40 pm  **Session 3: Chair - Hunter Moseley, PhD, CESB**

“Computational Inference of Molecular Mechanisms from Metabolic Time Series Data”

– **Eberhard Voit**, PhD, Professor and David D. Flanagan Chair in Biological Systems; Co-Director, Integrative BioSystems Institute; The Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University

2:30 pm  “Understanding Lung Cancer Metabolism Using Computational Systems Biology and Kinetic Models”

– **Zhen Qi**, PhD, Research Engineer, Department of Biomedical Engineering, Georgia Institute of Technology

3:20 pm  “Exogenous Metabolic Enzymes as Therapies”

– **Chang-Guo Zhan**, PhD, Director, Molecular Modeling and Biopharmaceutical Center (MMBC); Director, Chemoinformatics and Drug Design Core of CPRI; Endowed College of Pharmacy Professor in Pharmaceutical Sciences; Professor, Department of Pharmaceutical Sciences, UK College of Pharmacy

4:10 pm  **Tea Break**

Poster Session

4:30 pm  **Session 4: Chair - Richard Higashi, PhD, CESB**

“Structural analysis of epigenetic marking of DNA”

– **Andrew N. Lane**, PhD, Professor, Center for Environmental & Systems Biochemistry, Department of Toxicology and Cancer Biology, Markey Cancer Center; UK College of Medicine

5:20 pm  “Metabolomics and Metabolism in Diabetes”

– **K. Sreekumaran Nair**, MD, PhD, Professor of Medicine, Endocrinology Mayo Clinic

6:10 pm  **Closing Remarks: Richard Higashi, PhD**

6:15 pm  Adjourn for dinner (Pre-Registered Attendees)
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