



4th Danish Symposium on Metabolomics

Date: Friday 15th November 8.30 – 16.30, Auditorium A2-70.03

Location: University of Copenhagen, Faculty of Life Sciences, Thorvaldsensvej 40, Frederiksberg C

Organizers: Nikoline J. Nielsen and Jan H. Christensen, University of Copenhagen and Kim Højly-Larsen, Symphogen.

Metabolomics concerns the comprehensive characterization of small molecule metabolites in biological systems. It can provide an overview of the metabolic status and global biochemical events associated with a cellular or biological system. The main topic of the 4th Danish Symposium on Metabolomics is CHROMATOGRAPHY-, MASS SPECTROMETRY- and NMR-BASED METABOLOMICS. Three international experts will give 5 hours of lectures in three disciplines of metabolomics. From problem definition, sampling, sample preparation, analytical techniques to data processing and interpretation. This year we will include a poster session and we urge participants to bring posters with metabolomics related research. Participation with poster should be indicated upon registration at www.biopeople.dk. Poster abstracts should be submitted no later than Monday November 11th to njn@life.ku.dk. Best posters are awarded.

08.30 – 09.00 Registration, coffee and exhibition

09.00 – 09.05 Welcome

Session 1: CHROMATOGRAPHY-BASED METABOLOMICS

09.05 – 11.00 **Hans-Gerd Janssen**, Unilever Research and Development, Vlaardingen, the Netherlands.

Dr Janssen is head of the chromatography and mass spectrometry expertise group. Since 2004 he also is a part-time professor at the University of Amsterdam. Dr Janssen's research areas include applications and theoretical aspects of all forms of chromatography and mass spectrometry, especially method development for analyses using liquid chromatography, gas chromatography and mass spectrometry.

11.00– 12.30 *Poster session, exhibition and lunch*

Session 2: MS METABOLOMICS DATA HANDLING FOR BIOMARKER DISCOVERY

12.30 – 14.00 **Julien Boccard**, School of Pharmaceutical Sciences, University of Geneva, University of Lausanne.

Dr Boccard finished his PhD thesis on knowledge discovery in pharmaceutical sciences in 2009 and is now a senior assistant at Pharmaceutical Analytical Chemistry. In spite of his young age, Dr Boccard has an excellent track record in this field as well as in teaching. The talk is focussed on processing and analysis of MS metabolomics data from raw signals to biomarker discovery including signal processing, dimensionality reduction, integration of biological knowledge, data modelling and fusion strategies. The approaches will be illustrated using practical examples.

14.00 – 15.00 *Poster session, exhibition and coffee break*

Session 3: NMR-BASED METABOLOMICS

15.00 – 16.30 **Hector Keun**, Dept. of Biomolecular Medicine, Imperial College, London, UK.

Dr Keun joined Imperial College in 2001. His research is focussed on the application of NMR-based metabolomic profiling to toxicology and oncology. Metabonomics in medicine aims to generate biomarkers for better detection, to predict an individual's response to treatment and identify new avenues for therapy. It is also key technology in translational research, because the methods used, such as NMR spectroscopy of extracellular fluids, are minimally invasive, non-destructive and can be applied in similar fashion to clinical investigation and experimental models.

16.30 – 16.35 A few final words from the organizers

Registration on-line: www.biopeople.dk. The symposium is free. Registration is required.

