

Agilent European Metabolomics Seminar Tour

Wednesday, October 9th 2019

Agilent Centre of Excellence,
Cheadle, Greater Manchester



Agenda

Location:

Agilent Centre of Excellence
5500 Lakeside
Cheadle
Royal Business Park
Cheshire
SK8 3GR
UK

09:30 - 10:00	Registration and Coffee
10:00 - 10:30	Agilent Technologies' solutions for metabolomics research – an overview by Steve Fischer, Director of Marketing, Academia and Government, Agilent Technologies
10:30 -12:30	Workshops
12:30 – 13:30	Working Lunch with presentation on "Automated plasma sample preparation for better outcomes in metabolomics research"
13:30 - 15:30	Workshops
15:30 – 16:30	Overview on MPP and wrap up

Workshop 1: Targeted Metabolomics on the 6470 TQ using the Biocrates p180 kit

A recent addition to the metabolomics solutions offered on the 6470 Triple Quadrupole is support of the Biocrates p180 kit allowing for a wide range of biological and therapeutic studies with samples originating from cell cultures to animal models and human biological fluids.

This workshop will focus on:

- Biocrates AbsoluteIDQ p180 Kit to confidently obtain detailed knowledge about the metabolic phenotype of an organism
- Sample preparation
- Principle of the assay – e.g. plate layout or use of internal standards – and performance
- Present Biocrates MetIDQ software workflow

Workshop 2: Agilent Flux Analysis Solution

In qualitative flux analysis, a stable isotope tracer (typically containing ¹³C, ¹⁵N, or ²H) is introduced into the biological system, and results in changes in the isotopic pattern (isotopologue distribution) of downstream metabolites and thereby estimates intracellular metabolic flux patterns.

This workshop will focus on:

- An Overview of Agilent's integrated flux analysis solution on the new 6546 QTOF
- Discussion on experimental design for Flux Analysis.
- How to set up data acquisition parameters on the Agilent 6546 Q-TOF system
- Data Processing in our integrated workflow for processing isotopologue data
- Visualising Pathways in motion

Workshop 3: New workflows for building lipid databases, profiling and identifying

Lipidomics, an emerging subfield of metabolomics, involves the identification and quantification of the lipidome in biological systems. Advances in front end separation techniques, mass spectrometry capability including ion mobility and new software solutions have all contributed to the acceleration of the lipidomics field.

This workshop will focus on:

- The role of HPLC and SFC in lipidomics
- Experimental setup on 6560 Ion Mobility QTOF
- Introducing the Lipid Annotator software for MSMS identification and building of databases
- Improving Coverage of the Plasma Lipidome using Iterative MS/MS
- Improving Coverage of the Plasma Lipidome using ion mobility

Workshop 4: Fiehn GCMS Metabolomics library

Gas chromatography / mass spectrometry (GC/MS) offers high separating power and high sensitivity for metabolomic research.

This workshop will focus on:

- Introducing the new 5977B GC/MSD
- Setting up your GCMS to allow for retention time locking
- New software tools for deconvolution and library searching
- Workshop to demonstrate the complete workflow for metabolomics using Masshunter software

Learn more: explore.agilent.com/european-metabolomics-seminar-tour

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