

SKYLINE COURSE 2023

Venue ISAS e.V., Otto-Hahn-Straße 6b, 44227 Dortmund, Germany

Date March 20 to 23, 2023

+++ DAYS 2 to 4, from 8 to 9 am: “Sky-Jam” with Brendan MacLean +++

DAY 1: Monday, March 20, 9 am, ISAS lecture hall

Introduction to Targeted Quantitative Proteomics & Skyline, SRM Assay Development

Instructors Dr Christina Ludwig, Brendan MacLean, Dr Roman Sakson

Content

- Introduction to selected reaction monitoring (SRM) and quantitative analysis
- Introduction to Skyline
- Hands-on SRM assay development
- Use of predicted and empirical spectral libraries for method development

DAY 2: Tuesday, March 21, 9 am, ISAS lecture hall

Parallel Reaction Monitoring (PRM), Indexed Retention Time & Absolute Quantification

Instructors Dr Christina Ludwig, Brendan MacLean, Dr Yvonne Reinders, Dr Jörg Reinders

Content

- Differences between SRM and PRM, introduction to DIA
- Indexed retention time (iRT) principle
- Hands-on manual revision of data in Skyline
- Signal calibration and absolute quantification for peptides and metabolites

DAY 3: Wednesday, March 22, 9 am, ISAS lecture hall

MS1 Filtering, DIA Data Analysis & Further Advanced Topics

Instructors Suyuan Chen, Juan Camilo Rojas Echeverri, Amol Fatangare

Content

- DDA MS1 filtering for different applications
- Going from DIA to PRM
- Working with ion mobility
- DIA PASEF data analysis

DAY 4: Thursday, March 23, 9 am, ISAS lecture hall

Small Molecules Data Analysis

Instructors Dr Noortje de Haan, Dr Michele Wölk

Content

- Data analysis for peptides and small molecules in Skyline (keynote by Dr Jörg Reinders)
- Introduction to lipidomics
- Hands-on lipidomics data analysis
- Introduction to glycomics
- Hands-on glycomics data analysis

Please note:

There will be sufficient time for discussion as well as for interactions among participants and instructors. The course also includes the popular morning “Sky-Jam” sessions led by Brendan MacLean with hands-on Skyline processing. As instructors continually update their content for this course, the schedule may change slightly.