

Training in analytical methods for mass spectrometry-based lipidomics

Day 1 – September 30, 2024
Venue: Library, 1st floor, IBISS, Belgrade

Time	Title	Speaker/Participants
09:30 – 9:45	Registration of participants	
09:45 – 09:55	STRIMHealth project overview	Dr. Nataša Veličković, IBISS STRIMHealth PI
10:00 – 10:45	Theoretical overview of Mass Spectrometry (MS) in clinical lipidomics	Prof. Matej Orešič, ORU
10:45 – 11:00	Coffee break	
11:00– 11:45	Lipid data processing and analysis for targeted lipidomics	Prof. Matej Orešič, ORU
11:45 – 12:00	Coffee break	
12:00 – 12:45	Integration of lipidomics data and pathway analysis	Prof. Matej Orešič, ORU
12:45 – 14:00	Lunch	
14:00 – 15:00	Application of quantitative lipidomics in biology and biomedicine	Prof. Matej Orešič, ORU Dr Marijana Petković, INN Vinča

Day 2 – October 1, 2024
Venue: Library, 1st floor, IBISS, Belgrade

10:00 – 10:45	Appropriate analytical technique for different classes of lipids (GC-MS vs. LC-MS)	Prof. Tuulia Hyötyläinen, ORU
10:45 – 11:00	Coffee break	
11:00– 11:45	Sample preparation and mode of separations	Prof. Tuulia Hyötyläinen, ORU
11:45 – 12:00	Coffee break	
12:00 – 12:45	Lipid identification and data processing: practical considerations	Prof. Tuulia Hyötyläinen, ORU
12:45 – 14:00	Lunch	
14:00 – 14:30	Quality control	Prof. Tuulia Hyötyläinen, ORU
14:30 – 15:00	Final discussion and take-home messages	

Day 3 – October 2, 2024
Venue: MS facility, Laboratory for Plant Physiology, 3rd floor, IBISS, Belgrade

10:00 – 10:30	General introduction to LC-Orbitrap working principles (I group)	Dr. Luka Mihajlović, Analysis d.o.o. Dr. Uroš Gašić, IBISS
10:30 – 13:00	Practical course - Sample preparation for instrumental analysis and LC-Orbitrap analysis (I group)	Dr. Victor Castro-Alves, ORU Dr. Uroš Gašić, IBISS
15:00 – 15:30	General introduction to LC-Orbitrap working principles (II group)	Dr. Luka Mihajlović, Analysis d.o.o. Dr. Uroš Gašić, IBISS
15:30 – 18:00	Practical course - Sample preparation for instrumental analysis and LC-Orbitrap analysis (II group)	Dr. Victor Castro-Alves, ORU Dr. Uroš Gašić, IBISS

Day 4 – October 3, 2024
Venue: Library, 1st floor, IBISS, Belgrade

10:00 – 12:00	Fundamentals of HRMS data pre-processing using open-source tools (MS convert and MZmine) (I and II group)	Dr. Victor Castro-Alves, ORU
12:00 – 13:00	Lunch	
13:00 – 15:00	The data processing on MZmine	Dr. Victor Castro-Alves, ORU
13:00 – 15:00	Closing remarks	