

4th Annual Sample Prep Summer Course Sample Preparation for MS Bioanalysis: Theory, Practice and Applications

September 28th- October 1th 2021, Bydgoszcz,
Poland
Collegium Medicum Nicolaus Copernicus
University

Working on MS and having problems with data quality? Do not follow the rule “garbage in – garbage out”! Start from good sample preparation and learn how to choose the best option for your needs. Find out how to ensure proper calibration, evaluate matrix effect, monitor quality of your metabolomics analysis or perform *in vivo* study! Deepen your knowledge about conventional sample preparation methods and learn new concepts on microextraction technologies! The course will be organized by scientists from University of Copenhagen (Denmark), University of Oslo (Norway), University of Waterloo (Canada), Technical University of Crete (Greece), Middle East Technical University (Turkey), Medical University of Gdańsk (Poland) and Nicolaus Copernicus University (Poland).

Sample preparation is the most important step in bioanalysis. It determines what will be analyzed in subsequent steps. Therefore, to ensure the best quality of the data you need to know how to handle your samples and what tools are the best for the purpose.

This four-day course covers the following topics:

- Introduction to sample preparation with particular focus on sample collection, stability and storage, homogenization, anticoagulant and matrix effects
- Commonly used as well as novel bioanalytical methods including microextraction and microsampling
- Conventional and alternative matrices: blood, plasma, urine, tissues, saliva, faeces, breath, cell cultures
- Method development, challenges and advantages of the strategy
- Calibration and protocol validation
- Drug analysis, targeted and untargeted metabolomics
- *In vivo* study, temporal and spatial resolution
- A complete method development strategy will be illustrated by real-life examples
- Introduction to bioinformatics, overview of metabolomics data processing softwares
- ✓ The morning of the first day will be dedicated to theoretical considerations, while in the afternoon and on the following days hands-on experiments supported by on-site tutorials related to the given experiments will be performed

Information

Number of participants is limited. For all other information regarding course registration please contact **Dr. Barbara Bojko** send an email to bbojko@cm.umk.pl

Who Should Attend?

The course is targeted at both future and current MS users, who wish to gain a deeper insight into the sample preparation techniques utilized in bioanalysis and thus improve data quality and increase their productivity.



- ✓ PhD students
- ✓ Analytical chemists
- ✓ Biologists, clinicians and bioanalytical scientists
- ✓ Laboratory supervisors
- ✓ Scientists and industry regulators

This course is part of EuChemS-DAC Sample Preparation Study Group and Network

More information is available at:
<https://www.sampleprep.tuc.gr/en/home>

