

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 two-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 day hands-on experiments supported by on-site tutorials related to the given experiments will be performed.

#### 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

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 at Collegium Medicum Nicolaus Copernicus University in Bydgoszcz and Medical University of Gdansk, Poland.

#### Information

Number of participants is limited. For all other information regarding course registration please contact Dr. Barbara Bojko at +48 52 585-35-64 or send an email to [bbojko@cm.umk.pl](mailto:bbojko@cm.umk.pl)  
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