Master Thesis

Optimization of sample preparation workflows for high-throughput exposomics

This thesis in the field of **bioanalytical chemistry** is dedicated to the development and **optimization of a workflow for high throughput LC-MS-based sample preparation** in exposomic and metabolomic research.

Exposure to environmental chemicals plays a critical role in the onset of diseases. Exposome research aims to monitor relevant exogenous chemicals in human samples using a holistic approach that can associate exposure levels with health outcomes. Due to its high sensitivity and selectivity, LC-MS is the key technology used to characterize these associations. To enable the high-throughput capacity required, optimized high-throughput sample preparation workflows are a key element that will be tested within this thesis.

The *'Global Exposomics and Biomonitoring Laboratory'* consists of a motivated and interdisciplinary team acting in a strong national and international network. We want to better understand the impact of food- and environment-related toxicants on human health and use innovative mass spectrometric methods to investigate exposure, metabolism, and toxicity.

We offer …

- ✓ Intense supervision by postdoctoral associates in a dynamic research group
- ✓ Training in sample preparation and data processing workflows as well as hands-on instruction using state-of-the-art LC-MS equipment
- ✓ Potential for contributions to publications

Requirements

- ✓ BSc in Chemistry or a related field
- ✓ High interest in analytical chemistry, especially mass spectrometry
- ✓ Self-organized and reliable working habits
- ✓ Hands-on experience with instrumental analytical equipment is desired, but not required
- ✓ Application documents: Letter of motivation, CV, degree certificates and transcripts

Contact

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