Master Thesis

Measuring polyphenols in breast milk by LC-MS/MS

This thesis in the field of bioanalytical chemistry is dedicated to the optimization and validation of a novel mass spectrometry-based method quantitating up to 100 polyphenols in human samples. The final method will be applied to assess polyphenols in breast milk samples from cohort studies, potentially in cooperation with medical collaborators.

The working group 'Global Exposomics and Biomonitoring' 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.

Requirements

✓ Bachelor degree in chemistry or biotechnology
✓ Experience and interest in mass spectrometry and programming (e.g. R) would be an asset
✓ High level of self-motivation, commitment, and work ethics
✓ Application documents: Letter of motivation, CV, degree certificates and transcripts

Contact

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Relevant recent work

Oesterle I et al. (2021) Polyphenol Exposure, Metabolism, and Analysis: A Global Exposomics Perspective. Annual Review of Food Science and Technology

Ezekiel et al. (2022) Mycotoxin exposure biomonitoring in breastfed and non-exclusively breastfed Nigerian children. Environmental International