FELINA HILDEBRAND

PhD candidate in Analytical Chemistry | University of Vienna
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Department of Analytical Chemistry, University of Vienna, Waehringer Str. 38, 1090 Vienna, Austria

Education

Doctoral Programme in Natural Science – University of Vienna — Since 10/2019
- Focus area: Analytical Chemistry
- Thesis: Novel analytical workflows for lipid and metabolite identification and quantification
- Part of Vienna Doctoral School in Chemistry (DoSChem)

MSc, Chemical Biology – Friedrich Schiller University Jena — 10/2017 – 09/2019
- ERASMUS+ at University of Vienna, Chemistry — 10/2018 – 09/2019
- Thesis: Cross validation in quantitative lipid analysis using different MS platforms

BSc, Biochemistry and Molecular Biology – Friedrich Schiller University Jena — 10/2014 – 09/2017
- Thesis: Natural products of the phytopathogenic bacteria *Ralstonia solanacearum* and *Rhizobium radiobacter*

Work experience

University assistant (prae doc) – University of Vienna, Koellensperger Lab — Since 10/2019
- Research focus: LC-(IM-)MS-based lipidomics and metabolomics
- Teaching experience: Supervision of Bachelor thesis, Practice in Analytical Chemistry, and Basic Laboratory Course II A (all part of B.Sc. Chemistry, University of Vienna)

Master student – University of Vienna, Koellensperger Lab — 03/2019 – 09/2019
- Research focus: LC-MS-based quantification of sphingolipids

Short term research stays
- Research internship – University of Vienna, Koellensperger Lab — 10/2018 – 12/2018
- Student research assistant – Leibniz Institute for Natural Product Research and Infection Biology (HKI), Synthetic Microbiology — 05/2018 – 06/2018
- Student research assistant – Friedrich Schiller University Jena, Pharmaceutical Microbiology — 05/2018 – 07/2018 & 09/2017 – 12/2017

Bachelor student – Friedrich Schiller University Jena, Pharmaceutical Microbiology — 04/2017 – 07/2017
- Research focus: Extraction and identification of bacterial natural products

Skills

Laboratory skills:	Lipidomics, Metabolomics, Liquid chromatography, Mass spectrometry, Ion mobility spectrometry
Software:	R/R studio, Microsoft Office, Sykline, MZmine, GNPS, CompundDiscoverer, LipidDataAnalyzer, LipidSearch
Languages:	German (native), English (fluent)

Other activities

- Junior Board member of Austrian Proteomics & Metabolomics Association (APMA): maintenance of social media accounts, organization of networking events
- Travel grants from Austrian Society of Analytical Chemistry (ASAC), Austrian Chemical Society (GÖCH), German Chemical Society (GDCh)
- Voluntary work at Twentyone Football Club as assistant coach and cashier

Publications

Hildebrand, F.; Koellensperger, G.; Causon, T. MobiLipid: A Tool for Enhancing CCS Quality Control of Ion Mobility-Mass Spectrometry Lipidomics by Internal Standardization. Submitted to Analytical Chemistry, available as preprint: https://doi.org/10.26434/chemrxiv-2024-pjwm4.

Zuffa, S.; Schmid, R.; Bauermeister, A.; … **Hildebrand, F.**; … Dorrestein, P. C. microbeMASST: A Taxonomically Informed Mass Spectrometry Search Tool for Microbial Metabolomics Data. *Nat Microbiol* **2024**, *9* (2), 336–345. https://doi.org/10.1038/s41564-023-01575-9.

Hildebrand, F.; Schoeny, H.; Rampler, E.; Koellensperger, G. Scrutinizing Different Ionization Responses of Polar Lipids in a Reversed-Phase Gradient by Implementing a Counter-Gradient. *Analytica Chimica Acta* **2023**, *1265*, 341274. https://doi.org/10.1016/j.aca.2023.341274.

Schoeny, H.; Rampler, E.; El Abiead, Y.; **Hildebrand, F.**; Zach, O.; Hermann, G.; Koellensperger, G. A Combined Flow Injection/Reversed-Phase Chromatography–High-Resolution Mass Spectrometry Workflow for Accurate Absolute Lipid Quantification with ^{13}C Internal Standards. *Analyst* **2021**, *146* (8), 2591–2599. https://doi.org/10.1039/D0AN02443K.

Rampler, E.; Abiead, Y. E.; Schoeny, H.; Rusz, M.; **Hildebrand, F.**; Fitz, V.; Koellensperger, G. Recurrent Topics in Mass Spectrometry-Based Metabolomics and Lipidomics—Standardization, Coverage, and Throughput. *Anal. Chem.* **2021**, *93* (1), 519–545. https://doi.org/10.1021/acs.analchem.0c04698.

Conference contributions

HPLC 2023: 51st International Symposium on High Performance Liquid Phase Separations and Related Techniques in Düsseldorf, Germany – Poster presentation: "Development and validation of a LC-MS method for the quantitative analysis of mannitol and lactulose in the dual sugar test" 06/2023

ANAKON 2023 in Vienna, Austria – Poster Presentation: "LC-MS Method Development and Validation for Assessing Intestinal Permeability using a Dual Sugar Test employing Mannitol and Lactulose" 04/2023

EMBO Practical Course on Metabolomics Bioinformatics for Life Scientists in Wageningen, Netherlands – Poster Presentation: "Characterization of the NIST Candidate Reference Material: Frozen Human Urine Suite for Metabolomics for the integration as QC sample in untargeted metabolomics workflows" 10/2022

HPLC 2022: 50th International Symposium on High Performance Liquid Phase Separations and Related Techniques in San Diego, USA – Talk: "Scrutinizing and Compensating Different Ionization Responses of Phospholipids in a Reversed-phase Gradient by Implementing a Counter Gradient" 06/2022

1st joint ILS Annual Conference and 7th Lipidomics Forum 2021 in Regensburg, Germany – Poster Presentation: "Lipid quantification by reversed phase liquid chromatography utilizing a counter gradient" 10/2021

Virtual young researcher APMRS annual conference (online) – Talk: "Utilizing a counter gradient in reversed phase-based lipid quantification to reduce matrix effects during ionization" 09/2021

Metabolomics 2021 (online) – Poster Presentation: "Retention behavior of a panel of metabolites on a mixed mode column compared to HILIC and RP columns" 06/2021

ASAC Young Analytical Chemists Forum 2021 (online) – Talk: "Mass spectrometry-based lipid quantification by reversed phase chromatography utilizing a counter gradient" 06/2021

LIPID MAPS® Spring School (online) – Poster Presentation: "Lipid quantification by reversed phase separation coupled to mass spectrometry utilizing a counter gradient" 04/2021