Curriculum Vitæ

Nikolai Köhler

nklkhlr.github.io
nikolai.koehler@tum.de google scholar Orcid ID

@nklkhlr @nklkhlr @nklkhlr

Education

Nov. 2020 – present **Ph.D.** in Bioinformatics TUM School of Life Sciences (Chair of Experimental Bioinformatics)
Working Title: "Graph-Based Methods for the Analysis and Integration of Lipidome and Metabolome Data into the Omics-Landscape"

Oct. 2018 – Oct. 2020 **M.Sc.** in Molecular Biotechnology (with high distinction) Technichal University of Munich (TUM)
Thesis: "Analysis of Organ-specific Lipidome Compositions and their Network Interactions in Mice"

Oct. 2014 – Oct. 2018 **B.Sc.** in Agricultural Science (with distinction) Technichal University of Munich (TUM)
Thesis: "Regulation of Pyrrolizidine Alkaloid Biosynthesis in *Crassocephalum crepidioides*"

Publications

Journal Publications

1. **Nikolai Köhler**†, Tim Daniel Rose†, Lisa Falk and Josch Konstantin Pauling. Investigating Global Lipidome Alterations with the Lipid Network Explorer. *Metabolites*, 2021; 11(8), 488.
2. Haberl EM, Weiss TS, Peschel G, Weigand K, **Köhler N**, Pauling JK, Wenzel JJ, Höring M, Krautbauer S, Liebisch G, Buechler C. Liver Lipids of Patients with Hepatitis B and C and Associated Hepatocellular Carcinoma. *International Journal of Molecular Sciences*. 2021; 22(10):5297
3. Sebastian Schramm, **Nikolai Köhler**, Wilfried Rozhon. Pyrrolizidine Alkaloids: Biosynthesis, Biological Activities and Occurrence in Crop Plants. *Molecules*, 2019, 24, 498.

Preprints

1. Sebastian Dieckmann, Akim Strohmeyer, Monja Willershäuser, Stefanie Maurer, Wolfgang Wurst, Susan Marschall, Martin Hrabe de Angelis, Ralf Kühn, Anna Worthmann, Marceline M Fuh, Joerg Heeren, **Nikolai Köhler**, Josch K. Pauling, Martin Klingenspor. Susceptibility to diet induced obesity at thermoneutral conditions is independent of UCP1. bioRxiv, 2021; doi: https://doi.org/10.1101/2021.06.30.450595

† These authors contributed equally to this work.

Internships

Oct. 2017 – Mar. 2018 Roessner Lab (Chair of Plant Biochemistry) at the Unversity of Melbourne/Metabolomics Australia

Aug. 2015 – Sep. 2015 Julius Kühn Insitute, Federal Research Centre for Cultivated Plants, Institute for Grapevine Breeding

Work Experience

June 2019 – Oct. 2020 Student Research Assistant LipiTUM/Chair of Experimental Bioinformatics (TUM)

Apr. 2018 – Mar. 2019 Student Research Assistant Chair for Biotechnology of Horticultural Crops (TUM)

Apr. 2017 – Aug. 2017 Student Research Assistant Chair of Plant Breeding (TUM)

SCHOLARSHIPS

Oct. 2017 – Mar. 2018

PROMOS Travel Scholarshipb
German Academic Exchange Service

SUPERVISION

Bioinformatics

- "Development of a Deep Learning Model for the Detection and Prediction of Characteristic Fragmentation Patterns in Lipid Mass Spectra"
- "Network Integration of Metabolome and Microbiome Data using Local Search Optimisation"

Molecular Biotechnology

- "A Network-based Meta-Analysis to Link Nutritional Metabolites to Lipid Metabolism and Related Diseases"