



Manuel Höner

About Me

After my training as a pharmaceutical-technical assistant, I developed a keen interest in the field of pharmaceutical microbiology. Further specialization in the field of biotechnology during my bachelor's and master's degree fueled this passion. This resulted in my bachelor thesis at the national reference laboratory for antibiotic resistance (BfR) and a subsequent master thesis at the Fraunhofer IZI where I am currently working on biofilm assays and phages biology.

Date of birth: October 17, 1996

Work experience

MASTER STUDENT

April 2024 - present

Fraunhofer Institute for Cell Therapy and Immunology - Leipzig

Independent work in the field of phage-biology with focus on microbiology. Current focus includes the development of a novel biofilm assay.

BACHELOR STUDENT

November 2021 - August 2022

Federal Institute for Risk assessment/ Nationale Reference Laboratory for Antimicrobial Resistances - Berlin

Topic: Identification, characterization and stability of the plasmid-mediated fluoroquinolone resistance gene qnrS from commensal E. coli in the food chain

Skills learned: PAGE, pulsed-field gel electrophoresis, Southern blot hybridization, Illumina & Oxford nanopore sequencing and bioinformatic analysis (Bionumerics, BLAST, PATRIC, BRIG), transformation & conjugation, real-time PCR

PHARMACEUTICAL TECHNICAL ASSISTANT

July 2016 - February 2019

Sabine Blindow School/Eicklinger Pharmacy - Hanover

Understanding of pharmaceutical principles; drug classification; wet chemical analysis & quality control according to European Pharmacopoeia, galenic practice, GMP, FDA & EMA guidelines.

Education

MASTER OF SCIENCE

2022 - present

Ernst Abbe University, Pharmaceutical Biotechnology - Jena

Average: 1.4

Practice experience e.g.

- Detection of apoptosis via flow cytometric detection
- Native PAGE
- Enzymatic-generated nanoparticle deposition on microarray

Contact

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Skills

- Octave (Basics)
- Bionumerics (Basics)
- Python (Basics)
- R (Basics)
- GraphPadPrism

Languages

German - Native

English (C1) - Advanced

France (A1) - Beginner

- Reverse transcriptase PCR, affinity chromatography
- Transfection procedure and transient protein expression with Sf9 cells
- Yeast-Two Hybrid System (gene bank screening, protein-protein interaction)

- Bioprocess development at the Hans Knöll Institute, Jena

Optimization of fermentation processes for the production of mini-antibodies,
Supervision of ongoing R&D projects in the natural product pilot plant

- Immunocompetent organ models at Dynamic42, Jena

- In vitro diagnostics -fzmb GmbH, Bad Langsalza

R&D of immunoassays, R&D of microarrays

BACHELOR OF SCIENCE

2019 - 2022

Berlin University of Applied Sciences, Biotechnology - Berlin

Average: 1.5

Practice experience e.g

- Different chromatography variations
- Protein analysis: ELISA (one-site, two-site), Bradford assay, BCA assay, Lowry assay
- PAGE variants (native-PAGE, SDS-PAGE)
- PCR variants (qPCR, RT-PCR)
- Peptide mass fingerprinting using MALDI-TOF-MS Analysis using Mascot
- FACS
- Enzyme kinetics assays
- Determination of the volumetric oxygen transport coefficient
- Batch/Fed-Batch fermentation
- Gene mapping in E.coli, transduction, transformation, chemical mutagenesis, transposon mutagenesis, elucidation of a biosynthetic pathway
- Cytometry, transfection, HeLa & CHO cells

UNIVERSITY ENTRANCE QUALIFICATION

2013 - 2016

Axel-Bruns-School - Celle

Student assistant for microbiology and biotechnological processes in production, 2021

Overproduction of primary metabolites and secondary metabolites and production of chemicals; production of riboflavin from *Ashbya gossypii*, indigo from *E. coli*, antibiotics from streptomycetes, glutamic acid from *Corynebacterium glutamicum*; biological conversion of substances by yeast (biotransformation);

Summer school Aarhus, 2021

Process optimization of beer production, sensory evaluation, chemical analysis of analysis of raw materials and chemical componen