



ALEKSANDER SZARZYŃSKI

Master of Science

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- 31.01.1997

ABOUT ME

With a strong foundation in programming and a passion for cell therapeutics, I am committed to advancing research and development in this field. My expertise lies in leveraging computational methods to enhance the understanding and application of cell-based therapies.

SKILLS

Fermentation Technology

- Bioreactor operation
- Upstream processing
- Early downstream processing

Molecular biology techniques

- qPCR
- Protein purification
- Western blotting
- HPLC
- ELISA

Data analysis tools and modeling

- Python
- Julia
- R programming
- MODDE (DOE)

LANGUAGE

Polish: mother tongue
German: mother tongue
English: proficient (C1)

WORK EXPERIENCE

06/2023 - Present

Technical University Vienna; IBD Group

PhD Student

Utilizing hybrid modeling to formulate and identify mechanistic models for in vitro expansion and upscaling of NK and T cell cultures, focusing on critical process parameters and quality attributes to enhance immunotherapy and regenerative medicine applications.

03/2022 - 01/2023

Technical University Vienna; IBD Group

Scientific laboratory technician

- Project-based bioprocess development and optimization, conducting bioreactor cultivations, product extraction, HPLC assays, and SDS-PAGE based analysis to ensure efficient and high-quality bioproducts.
- Master thesis research

01/2019 - 08/2020

University of Veterinary Medicine Vienna;

Department of Physiology and Biophysics

Student Lab Assistant

- Routine maintenance of cell cultures, analysis of RNA and proteins from murine samples
- Bachelor thesis research

EDUCATION

○ 10/2023 - Present
Technical University Vienna
PhD programm Technical Chemistry

○ 10/2020 - 06/2023
University of Vienna
Biological Chemistry (M.Sc)

- Spectroscopic methods
- Molecular modeling
- Biotechnology
- Applied molecular biology
- Chemometrics

Master thesis:

Upstream process optimization for recombinant target protein expression in E.coli

○ 10/2017 - 06/2020
University of Veterinary Medicine Vienna
Biomedicine and Biotechnology (B.Sc)

- Molecular biology
- Histology and Anatomy of laboratory animals
- Laboratory animal husbandry
- Immunology and gene therapy
- Biotechnology

Bachelor thesis:

Influence of ketogenic diets and fasting on the expression of ucp3

○ 2011 - 2016
Technisches Gewerbemuseum TGM
Electrical engineering (renewable energy sources)