# TIMO ULLRICH

Scientist

## SUMMARY

I am looking for a challenging position in the industry where I can apply my expertise in the development of biologics. My goal is to advance my team leadership skills as well as my technical knowledge. I want to be part of a company that fosters career growth, continuous innovation and scientific excellence, values teamwork and provides a respectful, collaborative work environment.

## CONTACT

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## EDUCATION AND EXPERIENCE

**Doctorate of natural sciences (Dr. rer. nat.)**
Max-Planck-Institute for Biology Tübingen [Mar 2020 – Feb 2024]

International Max Planck Research School (IMPRS) 'From Molecules to Organisms'
Final grade: Magna cum laude (1.0)
Thesis: Computational Design and Optimization of G-CSFR Modulators

- Independent establishment and optimization of methods and assays.
- Successful collaborations with interdisciplinary partners.
- Experience with diverse molecular biological and biophysical analysis methods.
- Experience with computer-based analysis of molecules and data sets.

**Master of Science (M.Sc.)**
University of Stuttgart [Apr 2018 – Feb 2020]
Field of study: Technical Biology (Molecular Epigenetics, Biomaterials and nanobiotechnology, Antibody Engineering)
Final grade: 1.0
Thesis: Development of an epigenetic memory system based on DNA methylation in *Escherichia coli*

**Bachelor of Science (B.Sc.)**
University of Stuttgart [Oct 2014 – Mar 2018]
Field of study: Technical Biology (Natural sciences, Cell biology, Microbiology, Biochemistry)
Final grade: 1.6
Thesis: RNA-stabilized protein pores from plant viral building blocks: new components for bioaffinity coupling of a Phi29 DNA polymerase

## CONFERENCES

**APFED22 Advances in Protein Folding, Evolution, and Design**
Bayreuth, Germany
6. – 8.4.2022
Poster presentation

**Alpbach Workshop on: COILED-COIL, FIBROUS & REPEAT PROTEINS**
Alpbach, Austria
4 – 9.9.2022
Oral presentation

**Kind-Philipp Meeting**
Wilsede, Germany
31.5 – 3.6.2023
Oral presentation

## PUBLICATIONS

Ullrich, Timo, *et al.* "A strategy to design protein-based antagonists against type I cytokine receptors." PLoS biology 22.11 (2024): e3002883.

Ullrich, Timo, *et al.* "Tuning of granulopoietic signaling by *de novo* designed agonists." *bioRxiv* (2023): 2023-11 and under revision at *Molecular Therapy (2024)*.

Maksymenko, Kateryna, *et al.* "The design of functional proteins using tensorized energy calculations." *Cell Reports Methods 3.8* (2023).

Ullrich Timo, Sara Weirich, and Albert Jeltsch. "Development of an epigenetic tetracycline sensor system based on DNA methylation." *PLOS ONE* 15.5 (2020): e0232701.

## REFERENCES

Available upon request

## WORK EXPERIENCE

**Max-Planck-Institute for Biology Tübingen, Wrap-up-Postdoc**
[Mar 2024 – Oct 2024]

- Development of novel protein therapeutics and insight into their patenting process.
- Planning, conducting and analyzing experiments using a variety of methods.
- Interdisciplinary collaboration to collect a broad range of preclinical data (e.g. in vivo activity in zebrafish and mouse models and deimmunization of final protein design candidates).
- Management and structuring of parallel projects as well as supervision and close collaboration with students and doctoral candidates in an international team.

## SKILLS

**Techniques**
Circular dichroism, nano-differential scanning fluorimetry, surface plasmon resonance, microscale thermophoresis, fluorescence spectrometry, flow cytometry, microscopy, chromatography methods for protein purification, protein design, high-throughput optimization of proteins and peptides with computer-guided library design, protein fragment complementation and display methods, library generation, mammalian cell culture assays, cloning techniques, *in vitro* transcription, western blot, northern blot, RNA modification, reverse transcription, fluorescence *in situ* hybridization

**Language skills**
German (mother tongue), English (excellent)

**Digital skills**
Unix shell (advanced), Python (advanced), R (basic), Microsoft Office, Inkscape, Fiji (image analysis), PyMol (protein structure visualization, modelling and design), AlphaFold (protein structure prediction), Damietta (tensor-based energy calculations for protein structures), ProteinMPNN, VMD

**Soft skills**
- Ability to analyze and evaluate scientific data in detail to produce meaningful results.
- Excellent written and oral communication skills, with experience in presenting at international conferences and publishing scientific papers.
- Efficient time management of parallel projects and tasks to deliver timely results.
- Ability to work effectively in a dynamic and international environment, adapt quickly to new challenges and foster a productive work environment through open communication.