

Valentin von Werz

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Technische Universität Wien: Vienna: April 2022 - present

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| PhD candidate | - Process development for the optimization of Natural Killer (NK) cell expansion |
| | - Identification of Critical Process Parameters (CPPs) and the Critical Quality Attributes (CQAs) |
| | - Relationship and correlation identification between CPPs and CQAs |
| | - Development of novel cultivation techniques of NK cells in stirred tank bioreactors |
| | - Application of Process Analytical Techniques to monitor and regulate the expansion process |

Aelian Biotechnology: Vienna: February 2021 - February 2022

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| Research Assistant | - Generation of numerous CRISPR/Cas modified cell lines (incl. CRISPR_KO, CRISPRi and CRISPRa) |
| | - Methods used included single-cell RNA-seq workflow in different cell types (cancer cell lines and primary T cells) in pooled and arrayed format, including cell culture, virus production, sgRNA library cloning, single-cell RNA extraction, NGS library preparation |

Novartis, Basel: January - July 2020

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| Recent Graduate | - Recent graduate position in the department of autoimmunity, transplantation and inflammatory disease in the lab of Dr. Grigory Ryzhakov |
| | - Work on small molecule inhibitor targeting an autoimmune specific activation of different pathways |
| | - Methods used included qPCR, cellular assays, siRNA modified cell lines, CRISPR/Cas9 modified cell lines, FACS, western blotting and bead-based assays |

University of Oxford: Master's thesis: April - September 2019

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| Thesis title: | - Assessment of techniques to quantify NETosis in neutrophils in the lab of Prof. Irina Udalova at Kennedy Institute of Rheumatology |
| Skills: | - Methods used included cell culture work, handling of CRISPR/Cas9 in house generated KO cell lines, sequencing prep., live cell imaging, immunoprecipitation staining, fluorescence-based quantification, western blotting, ELISA, ATACseq |
| | - Entirely self-sufficient work on a six-month project |
| | - Collaborations with other laboratories in Oxford and Bristol to solve issues relevant for the whole laboratory |
| | - Critical use of publications, textbooks and websites |
| Outcome: | - Publication in Nature Immunology and Cell |
| | - NETosis proven in murine cell line with other methods than IHC for one of the first times |
| | - Finished with "summa cum laude" grade |

Ludwig-Maximilians-University Munich: Master of Science in Biology: 2017 - 2019

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| Modules: | - Immunology, virology, human biology, cell biology and bioinformatics |
| | - Additional seminars for lab-methods including HPLC, sequencing and CRISPR/Cas9 and cancer cells |

- Skills:**
- Work independently on own projects including development of Zika virus vaccine candidate based on CprME envelope
 - Dissertation on research projects including weekly presentations on progress

Ludwig-Maximilians-University Munich: Bachelor of Science in Biology: 2014 - 2018

- Modules:**
- Genetics, human-biology, immunology, cell-biology, chemistry, mathematics, physics, microbiology, ecology, physiology, zoology, botany
 - Focused on Immunological research after broad education on a variety of biological fields including practical work in each field

Publications:

- “Distinct transcription factor networks control neutrophil-driven inflammation” in **Nature Immunology** <https://doi.org/10.1038/s41590-021-00968-4>
- “Meta-data analysis to identify and describe the relationship 1 between CQAs and CPPs in natural killer cell expansion 2 processes” in **Cytotherapy** (currently under review)

Extracurricular activities

- One-week seminar on Genome Wide Association Studies (GWAS) in Barcelona
- Participation at the „5 Euro Startup “entrepreneur course at the LMU Munich
- Scholarship of the international office of LMU Munich for an entrepreneurship travel to Montreal, Canada
- Tutor in practical courses for Bachelor and Master students