Curriculum vitae

Valentin von Werz

Personal Information

Name:	**Dr. techn. Valentin von Werz**
Current affiliation:	Institute of Chemical, Environmental and Bioscience Engineering; TU Wien
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Higher Education

2022 - 2026	**PhD Study** "Bioprocess development" at the Technische Universität Wien, Vienna, Austria – with distinction
2017 - 2019	**Master Study** "Biology" at the Ludwig Maximilians Universität München, Munich, Germany

Appointments & Positions

Since 2026	PostDoc for bioprocess development at TU Wien
2022 - 2026	PhD candidate for bioprocess development at TU Wien
2019 - 2022	Researcher in industry at Novartis and Aelian Biotechnology
2018 - 2019	Master´s thesis at University of Oxford, UK

Selected Grants, Fellowships and Awards

Since 2026	Project lead in industrial collaboration with NovoArc GmbH
Since 2025	Project lead in industrial collaboration with Repligen
Since 2025	Project lead in FFG-Bridge on CFD simulations with NK cells
Since 2025	Project lead in FWF Weave on Digital twin-assisted process design for NK therapies

Publications and patents

1. **von Werz V**., Szarzynski A, Hadrbolec M., Mattert G., Zigon-Branc S, Kozma B., Dammermann W. and Spadiut O. "A novel cultivation strategy to recover NK cell cytotoxicity" ***Front. Bioeng. Biotechnol.***,2026, doi: 10.3389/fbioe.2026.1797129.
2. **von Werz V**., van Heuvel Y., Hadrbolec M., Wagner M., Eibl P., Huber F., Meyer M., Bongratz P., Witz C. and Spadiut O. "Homogeneous shear distribution improves NK-92 cell cytotoxicity in a clinically relevant 2 L membrane-stirred bioreactor" ***Front. Bioeng. Biotechnol***., 2026, 4:18049452026. doi: 10.3389/fbioe.2026.1804945
3. **von Werz V**., Hadrbolec M., Kozma B., Szarzynski A. and Spadiut O. "Process for the production of natural killer cell formulations for cell therapy"; ***Patent No. A50177/2025***
4. **von Werz V**., Hadrbolec M., Kozma B., Szarzynski A. and Spadiut O. "Process for the production of natural killer cell formulations for cell therapy"; ***Patent No. PCT/EP2026/057586***
5. **von Werz V**., Birner-Grünberger R. and Spadiut O. "TME-resistant NK cells"; ***Patent No. A50338/2025***
6. **von Werz V**., Birner-Grünberger R. and Spadiut O. "TME-resistant NK cells"; ***Patent No. PCT/EP2026/064234***
7. **von Werz V.**, Szarzynski A, Zigon-Branc S, and Spadiut O. "Quality standards for NK cell immunotherapies" ***Front. Bioeng. Biotechnol.***, 2025, 13:1716975. doi : 10.3389/fbioe.2025.1716975
8. **von Werz V**., Szarzynski A, Mattert G., Zigon-Branc S, Dammermann W. and Spadiut O. "Cultivation strategy optimisation for NK-92 cell line expansion in static conditions". ***BMC Biotechnol***., 2026, 26:28. doi: 10.1186/s12896-026-01116-2.
9. Szarzynski A, **von Werz V**, Mattert G, Dammermann W and Spadiut O (2026) Automated cytotoxicity assessment of natural killer cells by flow cytometry. ***Front. Immunol.*** 17:1868673. doi: 10.3389/fimmu.2026.1868673

10.	Khoyratty T. E., Ai Z., Ballesteros I., Eames H. L, Mathie S., Martín-Salamanca S., Wang L., Hemmings A., Willemsen N., **von Werz V.**, Zehrer A., Walzog B., van Grinsven E., Hidalgo A. &. Udalova I. A. Distinct transcription factor networks control neutrophil-driven inflammation. ***Nat Immunol* 22**, 1093–1106 (2021). https://doi.org/10.1038/s41590-021-00968-4

Conferences and press releases

1.	**Patentierter Turbo für Immuntherapien gegen Krebs**, Press release article in scilog Magazine, 2025
2.	**Process development for NK cell production**, poster presentation at ISCT 2026, Dublin
3.	**Process intensification with ATF-perfusion in lactate-controlled stirred-tank bioreactor for NK cell manufacturing,** oral presentation at ESACT 2026, Salzburg
4.	**Advanced NK cell production process**, oral presentation at Advanced Therapies conference in London, 2026
5.	**Process development for automated NK cell production**, poster presentation at NK&ILC Symposium in Freiburg, 2026
6.	**Process development and scale-up for NK cell production**, oral presentation at Karolinska Instituted Crowdhelix meeting, Stockholm, 2025
7.	**Scalable and automated NK cell expansion: From time-resolved process insights to cytotoxicity recovery and soft-sensor-based process automation**, oral presentation at Advanced Therapies conference in London, 2025
8.	**Recovery of NK cell cytotoxicity at clinical scale, poster presentation**, DECHEMA society meeting, Frankfurt, 2024
9.	**Natural Killer Cell Cytotoxicity: A detection method comparison**, poster presentation at the International Conference on Lymphocyte Engineering, Munich 2023
10.	**Comparison of detection methods for the quantification of cytotoxicity in NK-92 cells**, oral presentation at Bioprocessing, Bioanalytics and ATMP Manufacturing in Dublin, 2023