CURRICULUM VITAE

PERSONAL INFORMATION

Name:	Thomas Höfler
Birthday/place:	12.12.1995 / Bruck/M., Styria, Austria
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MAIN INTERESTS

Molecular and **evolutionary genetics of microorganism**, with special interest in **genetic conflict** between host and pathogen (mostly viruses), within viral populations as well as within viral genomes. Using **hypermutator viruses** I study multiple aspects of **viral evolution** including **drug and vaccine resistance**, **host spillovers**, **speciation events**, **virulence**, **immune evasion**, **genomic evolution**, **evolvability** and **group dynamics**. State of the art molecular biology methods - including **next generation sequencing**, **single-cell sequencing**, **proteomics**, **cell culture assays**, **fluorescence microscopy** and **genetic manipulations** - are employed to characterize new emerging phenotypes in detail.

EDUCATION

June 2020 – ongoing	**PhD Program** International Max Planck Research School for Infectious Diseases and Immunology Freie Universität Berlin Working Group of Prof. Dr. Klaus Osterrieder and Dr. Jakob Trimpert
November 2018 – April 2020	**Master's Program** Molecular Microbiology (with distinction) University of Graz (NAWI Graz) Working Group of Prof. Dr. Joachim Reidl
March 2016 – November 2018	**Bachelor's Program** Molecular Biology (with distinction) University of Graz (NAWI Graz) Working Group of Prof. Dr. Günther Koraimann

EXPERIENCES

Teaching

June 2022	Practical Laboratory Course for Students of Veterinary Medicine (12/6/2022)
October 2019	Tutor for the Laboratory Course "Bacteriology and Bacterial Genetics" (14/10 – 25/10/2019)
November 2016 – May 2020	Tutor and Learning Coach Science and Mathematics TTZ Weiz (HTL Weiz)

Research

June 2020 – ongoing	Understanding drug resistance Viral evolution PhD thesis Working Group of Prof. Dr. Klaus Osterrieder and Dr. Jakob Trimpert
May 2019 – May 2020	Virulence regulation in *Vibrio cholerae* Porin regulation under envelope stress conditions in *Vibrio cholerae* Master thesis Working Group of Prof. Dr. Joachim Reidl
April 2018 – June 2018	Regulation of bacterial conjugation Bachelor thesis and laboratory internship Working Group of Prof. Dr. Günther Koraimann

SPECIAL SKILLS

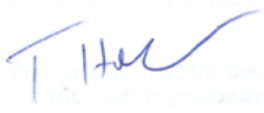
BSL 2 experience	Work on human pathogens including *Vibrio cholerae*, Herpes Simplex Virus 1 and Human Cytomegalovirus
Coding skills	Able to write scripts in Python, R, C++ and C# for bioinformatical applications
Good and fast learner	Merit-based-scholarship recipient for excellent academic performance 2017/18 and 2018/19 (NAWI Graz)

CONTACTS

Dr. Jakob Trimpert	Freie Universität Berlin jakob.trimpert@fu-berlin.de
Prof. Dr. Klaus Osterrieder	Freie Universität Berlin no.34@fu-berlin.de
Prof. Dr. Joachim Reidl	University of Graz joachim.reidl@uni-graz.at

PUBLICATIONS

1. Bischof, K., Schiffer, D., Trunk, S., **Höfler, T.**, Hopfer, A., Rechberger, G., and Koraimann, G. (2020) **Regulation of R1 Plasmid Transfer by H-NS, ArcA, TraJ, and DNA Sequence Elements.** *Frontiers in Microbiology* 11
2. Lembke, M., **Höfler, T.**, Walter, A. N., Tutz, S., Fengler, V., Schild, S., and Reidl, J. (2020) **Host stimuli and operator binding sites controlling protein interactions between virulence master regulator ToxR and ToxS in Vibrio cholerae.** *Mol Microbiol*
3. Nouailles, G., Wyler, E., Pennitz, P., Postmus, D., Vladimirova, D., Kazmierski, J., Pott, F., Dietert, K., Muelleder, M., Farztdinov, V., Obermayer, B., Wienhold, S. M., Andreotti, S., **Höfler, T.**, Sawitzki, B., Drosten, C., Sander, L. E., Suttorp, N., Ralser, M., Beule, D., Gruber, A. D., Goffinet, C., Landthaler, M., Trimpert, J., and Witzenrath, M. (2021) **Temporal omics analysis in Syrian hamsters unravel cellular effector responses to moderate COVID-19.** *Nat Commun* 12, 4869
4. Pennetzdorfer, N., **Höfler, T.**, Wolflingseder, M., Tutz, S., Schild, S., and Reidl, J. (2020) **sigma(E) controlled regulation of porin OmpU in Vibrio cholerae.** *Mol Microbiol*
5. Trimpert, J., Dietert, K., Firsching, T. C., Ebert, N., Thi Nhu Thao, T., Vladimirova, D., Kaufer, S., Labroussaa, F., Abdelgawad, A., Conradie, A., **Höfler, T.**, Adler, J. M., Bertzbach, L. D., Jores, J., Gruber, A. D., Thiel, V., Osterrieder, N., and Kunec, D. (2021) **Development of safe and highly protective live-attenuated SARS-CoV-2 vaccine candidates by genome recoding.** *Cell Rep* 36, 109493
6. Xing, N., **Höfler, T.**, Hearn, C. J., Nascimento, M., Camps Paradell, G., McMahon, D. P., Kunec, D., Osterrieder, N., Cheng, H. H., and Trimpert, J. (2022) **Fast-forwarding evolution-Accelerated adaptation in a proofreading-deficient hypermutator herpesvirus.** *Virus Evol* 8, veac099
7. Brunialti, M., **Höfler, T.**, Nascimento, M. and Trimpert, J. (2023) **Suicidal Phenotype of Proofreading-Deficient Herpes Simplex Virus 1 Polymerase Mutants.** *J Virol*, e0135922.
8. Leeks, A., Bono, L.M., Ampolini, E.A., Souza, L.S., **Höfler, T.**, Mattson, C.L., Dye, A.E. and Díaz-Muñoz, S.L. (2023) **Open questions in the social lives of viruses.** *Journal of Evolutionary Biology*, 36, 1551-1567.



(Thomas Höfler, BSc MSc)