

Curriculum Vitae

Julian Quehenberger

academic titles: Dipl.-Ing. Dr.techn.
nationality: Austria
email: julian.quehenberger@tuwien.ac.at
ORCID: <https://orcid.org/0000-0002-5075-9555>



Education

04/16 - 12/19 **Doctoral program in Technical Sciences in the field of biochemical engineering, TU Wien**

- PhD Thesis: “*Sulfolobus acidocaldarius*: establishing a novel host for cutting-edge biotechnology at its extremes”
- Alumnus of BIOPRO World Talent Campus 2019, Copenhagen, DK

10/13 - 03/16 **Master’s program Technical Chemistry with focus on Biotechnology and Bioanalytics, TU Wien**

- Diploma Thesis: “Expression tuning in *Escherichia coli* via a glucose/lactose mixed feed system”
- 2014: Merit-based scholarship
- Graduation with distinction

10/10 - 09/13 **Bachelor’s program Chemistry, KFU & TU Graz**

- Bachelor’s Thesis: “Interactions of the lettuce microbiome in the rhizosphere”
- 2011: Merit-based scholarship

Professional experiences and Internships

since 01/20 **PostDoc** at TU Wien, project “CO₂ fixation in extreme conditions” (FWO-FWF, I4508) for the investigation of chemolithoautotrophy in crenarchaeota

- Mentoring of BSc, MSc and PhD students
- Project management

since 10/19 **Fellow at FFG-Spin-off fellowship** at TU Wien, project “NovoSome” (FFG, 3330006) for the generation of tailor made archaeal tetraether lipids for oral drug delivery

03/16 - 09/19 **Project assistant** at TU Wien, Group of Integrated Bioprocess Development

- Research work on the project “CrossCat” (ERA-IB-15-029) for sustainable valorization of hemicellulosic waste streams with extremophilic organisms
- Mentoring of BSc and MSc students and interns

- Tutoring of lab courses “Biochemical Engineering” and “Orientation course for beginners in chemistry I”
- 11/14 - 12/14 **Research internship** at the Institute of Chemical Engineering, TU Wien and the Department for Agrobiotechnology IFA-Tulln, Austria
- Optimization and validation of microbial source tracking (MST) assays
 - Transfer of qPCR based MST assays to isothermal amplification
- 07/14 - 08/14 **Research internship** at Epidermolysis Bullosa Laboratories, Salzburg, Austria
- 07/13 - 08/13
- Cultivation and transfection of HEK cells
 - Vector construction and gene expression analysis and reporter gene assays
- 10/09 - 07/10 **Civilian service** at the Austrian Red Cross

List of Publications and scientific contributions

(9) Rastädter, K., Wurm, D. J., Spadiut, O., & **Quehenberger, J.** (2020). The Cell Membrane of *Sulfolobus* spp. – Homeoviscous Adaption and Biotechnological Applications. *International Journal of Molecular Sciences*.

(8) **Quehenberger, J.**, Pittenauer, E., Allmaier G., & Spadiut, O. (2020). The influence of the specific growth rate on the lipid composition of *Sulfolobus acidocaldarius*. *Extremophiles*.

(7) **Quehenberger, J.**, Steudler, S., & Spadiut, O. (2020). Evaluation of the potential of an enzymatically treated beech wood hydrolysate as carbon source for *Sulfolobus acidocaldarius*. *Bioresource Technology Reports*.

(6) Beisl, S., **Quehenberger, J.**, Kamravamanesh, D., Miltner, A., Spadiut, O., & Friedl, A. (2019). Exploitation of Wheat Straw Biorefinery Side Streams as Sustainable Substrates for Microorganisms: A Feasibility Study. *Processes*.

(5) **Quehenberger, J.**, Albersmeier, A., Glatzel, H., Hackl, M., Siebers, B., & Spadiut, O. (2019). A defined cultivation medium for *Sulfolobus acidocaldarius*. *J. of Biotechnology*.

(4) **Quehenberger, J.**, Reichenbach, T., Rettenbacher, L., Baumann, N., Divne, C., & Spadiut, O. (2019). Kinetics and predicted structure of a novel xylose reductase from *Chaetomium thermophilum*. *International Journal of Molecular Science*.

Poster presentation at the 12th International Congress of Extremophiles 2018, Ischia, Italy. Biomass determination of *Sulfolobus* spp. using flow cytometry.

Scientific article for GIT Labor journal. Symbiose von biologischen und chemischen Katalysatoren zur Umsetzung von Hemicellulose. <http://www.git-labor.de>, 13.02.2018.

(3) **Quehenberger, J.**, Shen, L., Albers, S. V., Siebers, B., & Spadiut, O. (2017). *Sulfolobus* – a potential key organism in future biotechnology. *Frontiers in Microbiology*.

(2) Wurm, D. J., **Quehenberger, J.**, Mildner, J., Eggenreich, B., Slouka, C., Schwaighofer, A., ... & Spadiut, O. (2017). Teaching an old pET new tricks: tuning of inclusion body formation and properties by a mixed feed system in *E. coli*. *Applied microbiology and biotechnology*.

(1) Cardinale, M., Grube, M., Erlacher, A., **Quehenberger, J.**, & Berg, G. (2015). Bacterial networks and co-occurrence relationships in the lettuce root microbiota. *Environmental microbiology*.

Skills and Qualification

Computer literacy	Lucullus (PIMS) SnapGene Imaris ImageJ Matlab MODDE Photoshop SigmaPlot inCyght	Techniques	Molecular cloning Cell culture technique Thermophilic cultivation Bioreactor cultivation Protein purification Western blot Enzyme kinetics Confocal microscopy Flow cytometry Bioprocess monitoring and control
Languages	German (native) English (fluent) Spanish (intermediate)		Design of experiments Statistical data analysis