

Curriculum Vitae

Dipl.-Ing. Ricarda Kriechbaum

Born: 02.09.1993 – Linz, Austria
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PROFESSIONAL EXPERIENCE

TU Wien

03/2020 -

PhD Candidate

- At the IBD Group of Prof. Oliver Spadiut
- Establishing standard operating procedures for microalgal and cyanobacterial growth on waste streams
- Sustainable extraction of bioplastics from cyanobacterial biomass
- Supervision of BSc and MSc Students
- Tutoring of lab courses “Biochemistry and Biotechnology” and “Bioprocess Technology and Bioanalytics”

Cooperations:

- **BDI Biolife Sciences:** Lab evolution of *Haematococcus pluvialis* by cell sorting
- **Plastocyan ATCZ 260** - Funded Project by Interreg (European Union): Establishing a sustainable extraction process for PHB in *Synechocystis* sp.

BOKU Wien

09/2018-02/2020

Scientific Employee at the Department of Applied Genetics and Cell Biology

- PI: Dr. Alexandra Castilho
- Plant Glycoengineering
- Transient expression of recombinant proteins in *Nicotiana benthamiana*
- Identification and characterization of plant native β -galactosidases
- RNA interference to reduce β -galactosidase activity *in planta*

BOKU Wien

10/2016 – 06/2018

Student Employee at the Department of Chemistry

- Tutor: Lab Course Analytical Chemistry
- Tutor: Lab Course Instrumental, Analytical and Physical Chemistry
- Tutor: Lab Course Introduction to Chemistry

analyse BioLab GmbH

06/2017

Summer Intern

- Bacteriology and Microbiology
- Preparation and testing of urological, gynecological and gastroenterological samples

Linz AG Kläranlage

09/2016

Summer Intern

- Taking samples of clarifiers in sewage treatment plant
- Analysis of municipal wastewaters (BSB, CSB, TOC, N_{total} , NH_4N , P_{total})

Erema GmbH**07/2015***Summer Intern*

- Determining chemical and material properties of recycled plastics samples
- Testing quality attributes of plastics

Almi GesmbH & Co KG**09/2014***Summer Intern*

- Product development
- Analytics of food components (vitamins, lipids, carbohydrates)

EDUCATION

BOKU**2016 - 2019***MSc in Biotechnology*

- Master Thesis: Identification and characterization of β -galactosidases acting on N-glycans
- Supervisor: Dr. Alexandra Castilho and Prof. Richard Strasser
- Passed with distinction

BOKU**2012 - 2016***BSc in Food- and Biotechnology*

- Bachelor Thesis: Bispecific HIV Antibodies
- Supervisor: Prof. Florian R ker

BG/BRG Khevenh llerstra e**2003 - 2011***Austrian State Exam*

- 2008: Student Exchange at EC Glass Highschool in Lynchburg VA (USA)

SKILLS

Languages

German (native), English (fluent)

Programs

MS Office (Word, Powerpoint, Excel, Access), Origin, Chromeleon, MODDE, Snapgene, Eve, Adobe Photoshop, Adobe Lightroom

*Techniques*HPLC, IC, Molecular Cloning, Western Blot, Lectin Blot, Enzyme Kinetics, Bioreactor Cultivations (*E. coli*, Microalgae, Cyanobacteria), Confocal Microscopy, Flow Cytometry, Real time qPCR, PCR, SDS PAGE**PUBLICATIONS**

Doppler P., **Kriechbaum R.**, and Spadiut O. "High-Throughput Characterization of the Filamentous Cyanobacterium Anabaena Sp. Using Flow Cytometry." [In eng]. J Microbiol Methods 199 (2022): 106510. doi: 10.1016/j.mimet.2022.106510.

Doppler P., Gasser C., **Kriechbaum R.**, Ferizi A., and Spadiut O.. "In Situ Quantification of Polyhydroxybutyrate in Photobioreactor Cultivations of Synechocystis Sp. Using an Ultrasound-Enhanced Atr-Ftir Spectroscopy Probe." Bioengineering 8, no. 9 (2021): 129. doi:10.3390/bioengineering8090129

Doppler P., **Kriechbaum R.**, Käfer M., Kopp J., Remias D., and Spadiut O. "Coelastrella Terrestris for Adonixanthin Production: Physiological Characterization and Evaluation of Secondary Carotenoid Productivity." *Marine Drugs* 20, no. 3 (2022): 175. doi:10.3390/md20030175

Doppler P., **Kriechbaum R.**, Singer B., and Spadiut O.. "Make Microalgal Cultures Axenic Again – a Fast and Simple Workflow Utilizing Fluorescence-Activated Cell Sorting." *Journal of Microbiological Methods* 186 (2021): 106256. doi: 10.1016/j.mimet.2021.106256

Kriechbaum, R., Ziaee E., Grünwald-Gruber C., Buscaill P., van der Hoorn R. A. L., and Castilho A.. "Bgal1 Depletion Boosts the Level of β -Galactosylation of N- and O-Glycans in *N. benthamiana*.". *Plant Biotechnol J* 18, no. 7 (2020): 1537-49. doi:10.1111/pbi.13316.

CONFERENCES

Algae Europe – Rome, Italy

12/2022

Oral Presentation: "*Potential of Lignocellulosic Waste as Substrate for Microalgal Cultivation*"

Poster Presentation: "*Novel Tools and Strategies for the Production of Bioplastic in Cyanobacteria*"

Netzwerk Algen – Vienna, Austria

09/2022

Oral Presentation: "*Waste-to-Value: Das Potential von Lebensmittelabfällen für die Mikroalgenkultivierung*"

Elevating Nordic Algal Biotechnology – Turku, Finland

06/2022

Oral Presentation: "*Lignocellulosic waste stream hydrolysis: Formation of inhibitors and dealing with them during microalgal cultivation*"

BioProScale – Berlin, Germany

03/2022

Poster Presentation: "*Waste-to-Value: Cultivating *Chlorella vulgaris* in hemicellulosic hydrolysates from wheat straw*"

DACH Algen Summit – Vienna, Austria

10/2021

Poster Presentation: "*In Situ Quantification of Polyhydroxybutyrate in Photobioreactor Cultivations of *Synechocystis* sp. using an Ultrasound-Enhanced ATF-FTIR Spectroscopy Probe*"