

Curriculum Vitae

General

Name: Julian Kopp
Date of birth: 17.09.1991,
Place of birth: Hall i. Tirol
E-mail: julian.kopp@tuwien.ac.at
Tel.: +43 1 58801 166485
Citizenship: Austrian



Education

University Education: November 2017- August 2020: **PhD degree** at the Christian Doppler Laboratory for Mechanistic and Physiological Methods for Improved Bioprocesses at the University of Technology Vienna, in the team of Prof. Christoph Herwig;

PhD thesis: Processing tools and methods to enable continuous biomanufacturing for recombinant protein production with *E. coli*

October 2015 – September 2017: **Master’s degree** in Biotechnology at the University of Natural Resources and Life Sciences, Vienna (BOKU)

Master thesis: Challenging the metabolic burden concept - A study of *E. coli* BL21(DE3) [pet30a] and BL21(DE3) [N-pro]

October 2011 - June 2015; **Bachelor’s degree** in Food science and Biotechnology at the University of Natural Resources and Life Sciences, Vienna (BOKU)

Within Bachelor’s degree: exchange semester at the National University of Galway (NUIG) at the College of Science

Bachelor thesis: Glycosyltransferases in *Biomphalaria glabrata*

School Education: 2002-2010; secondary school: “Reithmannngymnasium” in Innsbruck with specific focus on science

1998 – 2002; Primary school in Igls

Professional career

Current employment: Since September 2020: employed as a project assistant and Post-Doc researcher in the Integrated Bioprocess Development group at the University of Technology Vienna, in the team of Prof. Oliver Spadiut

Previous employment: November 2017- August 2020 employed as a project assistant at the Christian Doppler Laboratory for Mechanistic and Physiological Methods for Improved Bioprocesses at the University of Technology Vienna, in the team of Prof. Christoph Herwig

Internships absolved: July-August 2017: Internship at SANDOZ, Austria, Kundl; Department: microbial upstream processing

August-September 2016: Internship at SANDOZ, Austria, Kundl; Department: microbial upstream processing

July-August 2015: Internship at SANDOZ, Austria, Kundl; Department: microbial upstream processing

August 2014: Internship at AGES (Austrian Agency for Health and Nutrition)

February 2013: Internship at AGES (Austrian Agency for Health and Nutrition)

Civilian service: 2010 – 2011 at the institution for blind and visually impaired people in Tirol

Competences

Languages: German (native)

English (C1-level)

French (B1-level)

IT skills: Expertise and proper usage of Origin, Microsoft Office, Matlab, MODDE, ImageJ and Lucillus

Job-related Acquirements: specialised in microbial fermentation and the purification of target products; professional & precise work in molecular biology and biochemical related assays;

Publications and scientific contributions

- 11/2020 **Kopp, J.**, Kittler, S., Slouka, C., Herwig, C., Spadiut, O., & Wurm, D. J. (2020) Repetitive Fed-Batch: A Promising Process Mode for Biomanufacturing With *E. coli*. *Frontiers in Bioengineering and Biotechnology* 8, 573607. doi: 10.3389/fbioe.2020.573607
- 08/2020 Kittler S, **Kopp J.**, Veelenturf PG, Spadiut O, Delvigne F, Herwig C and Slouka C (2020) The Lazarus *Escherichia coli* Effect: Recovery of Productivity on Glycerol/Lactose Mixed Feed in Continuous Biomanufacturing. *Front. Bioeng. Biotechnol.* 8:993. doi: 10.3389/fbioe.2020.00993
- 06/2020 **Kopp, J.**, Zauner, F.B., Pell, A., Hausjell, J., Humer, D., Ebner, J., et al. (2020). Development of a generic reversed-phase liquid chromatography method for protein quantification using analytical quality-by-design principles. *Journal of Pharmaceutical and Biomedical Analysis*, 113412. doi: <https://doi.org/10.1016/j.jpba.2020.113412>.
- 05/2020 Schwaighofer A, Ablasser S, Lux L, **Kopp, J.** et al. Production of Active Recombinant Hyaluronidase Inclusion Bodies from *Apis mellifera* in *E. coli* B121(DE3) and characterization by FT-IR Spectroscopy. *Int J Mol Sci.* 2020;21(11):E3881. Published 2020 May 29. doi:10.3390/ijms21113881
- 02/2020 Metzger KFJ, Padutsch W, Pekarsky A, **Kopp J.** et al. IGF1 inclusion bodies: A QbD based process approach for efficient USP as well as early DSP unit operations. *J Biotechnol.* 2020;312:23-34. doi:10.1016/j.jbiotec.2020.02.014
- 11/2019 **Kopp, J.**, Slouka C, Spadiut O and Herwig C (2019) The Rocky Road From Fed-Batch to Continuous Processing With *E. coli*. *Front. Bioeng. Biotechnol.* 7:328. doi: 10.3389/fbioe.2019.00328
- 10/2019 **Kopp, J.**, Kolkmann, A.-M., Veelenturf, P.G., Spadiut, O., Herwig, C., and Slouka, C. (2019b). Boosting Recombinant Inclusion Body Production—From Classical Fed-Batch Approach to Continuous Cultivation. *Frontiers in Bioengineering and Biotechnology* 7, 297.
- 04/2019 Slouka, C., **Kopp, J.**, Strohmer, D., Kager, J., Spadiut, O., and Herwig, C. (2019). Monitoring and control strategies for inclusion body production in *E. coli* based on glycerol consumption. *J Biotechnol* 296, 75-82. doi: 10.1016/j.jbiotec.2019.03.014.
- 02/2019: Slouka C, **Kopp J.**, Spadiut O, Herwig C. Perspectives of inclusion bodies for bio-based products: curse or blessing?. *Appl Microbiol Biotechnol.* 2019;103(3):1143-1153. doi:10.1007/s00253-018-9569-1
- 11/2018 **Kopp, J.**, Slouka, C., Strohmer, D., Kager, J., Spadiut, O., and Herwig, C. (2018). Inclusion Body Bead Size in *E. coli* Controlled by Physiological Feeding. *Microorganisms* 6(4). doi: 10.3390/microorganisms6040116.
- 09/2018 Slouka, C., **Kopp, J.**, Hutwimmer, S., Strahammer, M., Strohmer, D., Eitenberger, E., et al. (2018). Custom made inclusion bodies: impact of classical process parameters and physiological parameters on inclusion body quality attributes. *Microb Cell Fact* 17(1), 148. doi: 10.1186/s12934-018-0997-5.
- 09/2017 Slouka, C., Brunauer, G.C., **Kopp, J.**, Strahammer, M., Fricke, J., Fleig, J., Herwig, C. (2017). Low-frequency electrochemical impedance spectroscopy as a monitoring tool for yeast growth in industrial brewing processes. *Chemosensors*, 5. doi: 10.3390/chemosensors5030024

03/2017 **Kopp, J.**, Slouka, C., Ulonska, S., Kager, J., Fricke, J., Spadiut, O., et al. (2017). Impact of Glycerol as Carbon Source onto Specific Sugar and Inducer Uptake Rates and Inclusion Body Productivity in *E. coli* BL21(DE3). *Bioengineering (Basel)* 5(1). doi: 10.3390/bioengineering5010001

Attended Conferences

07/2019 **Oral Presentation** at the BioProcess International Europe Conference & Exhibition, virtual Conference: “Monitoring Cell Populations and Tunable Promoters for Robust Continuous Upstream Processing”

02/2020 delayed to 02/2021 due to Corona pandemic: **Oral Presentation** at the 6th BioProScale Symposium 2018 in Berlin: “Continuous *E. coli* bioprocessing: Monitoring of subpopulations and how to deal with them”

04/2019 **Poster Presentation** at BASF International Summercourse 2019, in Ludwigshafen: “Population heterogeneities in long-term chemostat *E. coli* cultivations determined with online & at-line flow-cytometry analysis”

06/2019 **Oral Presentation** at the WORLD BIOPHARM FORUM 2019: Driving Value Through Intensified Bioprocessing in Oxford: “Continuous bioprocessing with *E. coli*: chances and drawbacks”

04/2019 **Oral Presentation** at the BioProcess International European Summit 2019 in Vienna: “Control Strategies for Continuous Bioprocessing and along the Lifecycle”

04/2019 **Poster Presentation** at the 10th Recombinant Protein Production Conference in Crete: “Population heterogeneities in long-term chemostat *E. coli* cultivations determined with online & at-line flow-cytometry analysis”

09/2018 **Oral Presentation** at the 12th Symposium of the European Society of Biochemical Engineering Sciences in Lisbon: “Impact of Glycerol as Carbon Source onto Inclusion Body Productivity in *E. coli* BL21(DE3)”

03/18 **Poster Presentation** at the 5th BioProScale Symposium 2018 in Berlin: “Impact of glycerol as carbon source onto specific sugar and inducer uptake rates and inclusion body productivity in *E. coli* BL21(DE3)”