Curriculum vitae

Personal Details

Name:	Assoc. Prof. Dipl.Ing. Dr.nat.techn. Oliver Spadiut
Date & place of birth:	07.05.1980 in Vienna, Austria
Tel:	+43 (0)1 58801 166473
E-mail:	oliver.spadiut@tuwien.ac.at
Website:	http://tinyurl.com/IBD-Vienna
ORCID:	0000-0003-0916-0644

Scientific Achievements at a glance

- **158 peer-reviewed scientific publications (78 corresponding authorships)**
- **h-index 30 (scopus on 10.01.2022)**
- **42 invited talks at international scientific conferences**
- **5 patents**
- **Associate Editor for *J. Biotechnol.***
- **peer-reviewing for 80 scientific Journals**
- **Member of the Faculty Board of TU Wien since 2015**
- **Member of the Study Commission "Technical Chemistry" since 2019**
- **total funding acquired = 9.5 Million Euros**

Education

04/15	**Habilitation (*venia docendi*) in Biotechnology**
08/15-10/15	**Visiting scientist** at the Laboratoire Interdisciplinaire de Physique Liphy, University Joseph Fourier, Grenoble, France
10/99-11/08	**Study "Food Science and Biotechnology"** at the University of Natural Resources and Life Sciences BOKU, Vienna, Austria
11/08	**Ph.D. degree (Dr. nat. techn.)** graduated with distinction
05/07-11/07	**Visiting scientist** at the Chemistry Department, University of British Columbia UBC, British Columbia, Canada
01/06-11/08	**Ph.D. Thesis** at the Division of Food Biotechnology
07/05	**Master of Science** graduated with distinction
11/04-05/05	**Visiting scholar** at the School of Biotechnology, Suranaree University of Technology SUT, Nakhon Ratchasima, Thailand
10/99-07/05	**Master study**

Professional Experience

07/22	**Honorary Professor** at the University of Applied Sciences **imc FH Krems** (https://www.fh-krems.ac.at/)
10/21	**co-founder and scientific advisor of** the TU Wien Spin-Off company **NovoArc GmbH** (https://www.novoarc.at/)
09/10-present	**employed at** the Research Division of Biochemical Engineering at **TU Wien**, Vienna, Austria

since 06/22	**Head of Research Area** Biochemical Engineering at TU Wien
since 06/18	**Associate Professor**
12/16-05/18	**Assistant Professor**
since 01/15	**Group Leader** "Integrated Bioprocess Development"
09/10-12/16	**University Assistant**

01/09-09/10 **Post-Doc** at the Division of Glycoscience at the Royal Institute of Technology KTH, Stockholm, Sweden

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Awards

08/22 **Top 10 candidate for the S&B Award** (Bridging Science and Business Award) conferred by the Rudolf Sallinger Fonds (http://sallingerfonds.at/die-sallinger-preise/sb-award/top-10-sb-award-2022/)

06/22 **Sustainability Award 2022** (2nd and 3rd place) conferred by Umweltdachverband GmbH (https://www.umweltbildung.at/startseite.html)

06/22 several **awards for excellent teaching** at TU Wien at the **ProDidactica 2022 and Best Teaching Award** (https://www.fsch.at/bachelor/pro-didactica/)

10/21 Winner of **VERBUND X Accelerator 2021** (https://www.verbundx.com/)

05/20 **Top 10 candidate for the S&B Award** (Bridging Science and Business Award) conferred by the Rudolf Sallinger Fonds (http://sallingerfonds.at/die-sallinger-preise/sb-award/top-10-sb-award-2020/)

03/20 **Sustainability Award 2020** (2nd place) conferred by Umweltdachverband GmbH (https://www.umweltbildung.at/startseite.html)

07/19 **Förderungspreis der Stadt Wien** in der Sparte Mathematik, Informatik, Naturwissenschaft und Technik (https://www.wien.gv.at/kultur/abteilung/ehrungen/foerderungspreis)

02/19 **i2c Award 2019** (https://i2c.tuwien.ac.at/startacademy-awards/)

07/18 **Wirtschaftskammerpreis 2018** (https://www.wko.at/site/bildungspolitik/wirtschaftskammerpreis-2018.html)

08/12 **"Achievement Award"** conferred by Novartis for developing a business concept for a biotechnology company during BioCamp 2012

08/12 selected participant in the **Novartis International Biotechnology Leadership Camp (BioCamp 2012)** (http://www.novartis.com/careers/biocamp/index.shtml)

05/12 **"Paper of the Month Award"** conferred by the scientific magazine LABORWELT (http://www.laborwelt.de/)

09/09 **"Award for excellent PhD Thesis 2009"** conferred by the Austrian Association of Molecular Life Sciences and Biotechnology ÖGMBT (http://www.oegmbt.at)

04/09 **"Research Award 2009 for Young Scientists"** conferred by the AGRANA Group Austria (http://www.agrana.com)

03/09 **"Award for Excellent PhD Thesis 2008"** conferred by the University Fellowship Organisation Austria (Allgemeine Hochschulstipendienstiftung Österreich)

05/05 Award for **"Outstanding Success in Study"** conferred by the University of Natural Resources and Life Sciences BOKU, Vienna

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Teaching at a glance

18 courses at TU Wien (since 2010)
7 courses at IMC FH Krems (since 2016)
1 course at FH Technikum Wien (since 2012)
2 courses at Johannes Kepler Universität Linz (2019 - 2022)

Teaching at TU Wien

Studieneingangsgespräch
Orientierungslehrveranstaltung (LU 1.5 h)
Bioverfahrenstechnik - Downstream Processing (VO 2.0 h)
Einführung in die Biotechnologie und Bioverfahrenstechnik (VO 1.0 h)
Biochemie Seminar (SE 1.0 h)
Biochemie und Biotechnologie (LU 3.5 h)
Biologie und Genetik industrieller Mikroorganismen (VO 1.3 h)
Bioprozess Technologie und Bioanalytik (LU 5.0 h)
Modelling and Methods in Bioprocess Development (VO 2.0 h)
Biotechnologie für Verfahrenstechniker (LU 2.0 h)
Journal Club Biosciences (SE 1.0 h)
Literatursuche für ChemikerInnen (VU 2.0 h)
Wahlübungen Bioverfahrenstechnik (LU 4.0/6.0/8.0 h)
Seminar zur Bachelorarbeit (SE 3.0 h)
Bachelorarbeit (UE 12.0 h)
Bachelorarbeit (LU 12.0 h)
Seminar zur Diplomarbeit (SE 1.5 h)

Nominated for: **Best Lecture Award 2018**
Best Distance Learning Award 2020, 2021 and 2022
Best Teacher Award 2019, 2020 and 2022

Teaching at imc FH Krems

Bioprocess Technology (VO 3.0 h)
Journal Club (VO 1.0 h)
Research Semester Preparation (SE 2.0 h)
Fermentation and Bioseparation Laboratory (LU 4.0 h)
Scientific Skills and Writing (VO 2.0 h)
Fermentation of Complex Hosts Systems (VO 1.0 h)
Fermentation Technology Laboratory (LU 7.0 h)

Teaching at FH Technikum Wien

Biotechnology (VO 3.0 h)

Peer-Reviewing for 80 Scientific Journals

Advanced Science, AMB Express, Analytical Biochemistry, Applied and Environmental Microbiology, Applied Biochemistry and Biotechnology, Applied Microbiology, Applied Microbiology and Biotechnology, American Society of Microbiology, BBA General Subjects, Biocatalysis and Agricultural Biotechnology, Biochemical Engineering Journal, Biochemistry, Bioengineered, Biologia, Biomass Conversion and Biorefinery, Bioresource Technology, Biotechnology Progress,

Biotechnology Advances, *Biotechnology and Bioengineering*, *Biotechnology Reports*, *BMC Biotechnology*, *Catalysis Letters*, *Chemical Engineering and Technology*, *Chemical Papers*, *Chemical Technology and Biotechnology*, *Clinical and Vaccine Immunology*, *Current Pharmaceutical Biotechnology*, *eBooks Bentham*, *Electronic Journal of Biotechnology*, *Engineering in Life Sciences*, *Enzyme and Microbial Technology*, *European Food Research and Technology*, *Extremophiles*, *FEBS*, *FEMS Microbiology Letters*, *FEMS Yeast Research*, *Food and Bioproducts Processing*, *Folia Microbiologica*, *Food Biotechnology*, *Frontiers in Microbiology*, *Fungal Biology and Biotechnology*, *Fungal Genetics and Biology*, *Gene*, *Gene Reports*, *Green Processing and Synthesis*, *International Journal of Biological Macromolecules*, *International Journal of Food Engineering*, *International Journal of Peptide Research and Therapeutics*, *Journal of Agricultural and Food Chemistry*, *Journal of Bacteriology*, *Journal of Biotechnology*, *Journal of Biological Engineering*, *Journal of Cellular Biochemistry*, *Journal of Chemical Technology and Biotechnology*, *Journal of Environmental Management*, *Journal of Food Biochemistry*, *Journal of Microbiological Methods*, *Journal of Molecular Catalysis B: Enzymatic*, *Letters in Applied Microbiology*, *Journal of the Royal Society Interface*, *Letters in Applied Microbiology*, *Marine Drugs*, *Microbial Biotechnology*, *Microbial Cell Factories*, *Molecular Biotechnology*, *New Biotechnology*, *Physiologia Plantarum*, *Plasmids*, *PLOS One*, *Preparative Biochemistry and Biotechnology*, *Process Biochemistry*, *Processes*, *Protein and Peptide Letters*, *Protein Science*, *Scientific Reports*, *Sensors*, *Separation and Purification*, *Separation Science and Technology*, *Springer Plus*, *The Protein Journal*

Projects (total funding acquired = 9.5 Million Euros)

Projects at a glance

FWF	4 projects (1.2 Mio €)
FFG	9 projects (1.1 Mio k€)
WWA	1 project (270 k€)
EU	2 projects (240 k€)
CD Laboratory	Module Leader in Downstream Processing (320 k€) Laboratory Head (3.2 Mio €)
Industrial R&D	29 projects (3.1 Mio €)

List of projects

since 2022 **Christian Doppler Laboratory** "Inclusion Body Processing 4.0" with Boehringer Ingelheim RCV

since 2022 Project Partner in the **FFG COMET Center** "Hydrogen Research Centre Austria"

since 2022 **FFG Innovationsscheck** with NovoArc GmbH

since 2022 **FFG Innovationsscheck** with myBIOS GmbH

since 2022 **Industrial Project** "Early DSP" with Sciotec GmbH

since 2022 **Industrial Project** "hemoglobin" with Planeat Foods PTE LTD

since 2022 **Industrial Project** "HRP from *E. coli*" with Thermo Scientific GmbH

since 2022 **Industrial Project** "Interferon α1,8" with pharma& GmbH

since 2022 **Industrial Project** "green H_2 production" with VERBUND

since 2021 **Industrial Project** "Continuous USP" with BASF

since 2021 **Industrial Project** "Inclusion Body generation" with Miltenyi Biotec

since 2021 **Industrial Project** "Pegasys" with Loba GmbH

since 2021 **Interreg Project** "PlastoCyan" ATCZ260

since 2021 **Industrial Project "**Membrane proteins in yeast" with Syngenta

since 2020 **FWF International Scientific Project** "CO_2 fixation in extreme conditions" I4508 funded by the Austrian Science Fund FWF (http://fwf.ac.at/asp/projekt_res.asp)

2019-2022 Faculty Member of the TU Wien **Doctorate Program** "Bioactive" (https://bioactive.tuwien.ac.at/home/)

2019-2022 **FFG Project "**EIS für Fabs – ein neuartiger elektrochemischer Biosensor zur Überwachung von Antikörperfragment-Produktionsprozessen" (FFG 874206) with Alfred Gruber GmbH

2017-2022 **FWF Stand Alone Scientific Project** "Recombinant horseradish peroxidase for targeted cancer treatment" P30872-B19 funded by the Austrian Science Fund FWF (http://fwf.ac.at/asp/projekt_res.asp)

2021 **Industrial Project** "Optimization of an inclusion body process" with ZETA GmbH

2021 **Industrial Project** "Mutants" with Medac GmbH

2021 **Industrial Project** "Fermentation filamentous fungus" with bisy GmbH

2019-2021 **FFG Project "**Triggering leakiness in a novel proprietary enGenes-X-press *E. coli* strain" (FFG 872643) with enGenes GmbH

2020-2021 **FFG Innovationsscheck** with BDI GmbH

2020-2021 **Industrial Project** "Inclusion Body Processing - Follow up" with Boehringer Ingelheim RCV

2020 **FFG Innovationsscheck** with Goldenleaf GmbH

2020 **Industrial Follow-Up Project** "Inclusion body processing" in cooperation with Sciotec Diagnostic Technologies GmbH

2020 Project Partner in the **University Project** "BioNoWo" sponsored by the Center for Technology and Society

2020 **Industrial Follow-Up Project** „HRP from *E. coli* inclusion bodies" in cooperation with Hy2Care

2020 **FFG Innovationsscheck** with DirectSens GmbH

2019-2020 **Industrial Project** "Novel strategies for feed" with Biomin GmbH

2019-2020 **Industrial Project** "Recombinant protein production with glyco-engineered yeasts – Upstream and Downstream Processing" with Vlaams Institute of Biotechnology VIB

2018-2020 **Industrial Project** "Statistical evaluation of bioprocess data" with Boehringer Ingelheim RCV

2017-2020 **Industrial Project** "Downstream Processing" with Medac GmbH

2017-2020 **Wiener Wirtschaftsagentur Project** "Integrative bioprocess development for biosimilar production using the enGenes-X-press technology" (ID 1898413) with enGenes GmbH

2019 **Industrial Project** "USP with Lactose" with Boehringer Ingelheim RCV

2019 **Industrial Project** "Enzyme in *E. coli*" with Valanx GmbH

2019 **Industrial Project** "AM" with Thoeris GmbH

2018-2019 **Industrial Project "Inclusion Body Refolding"** with Boehringer Ingelheim RCV

2018 **FFG Innovationsscheck** with DirectSens GmbH

2017-2019 **Industrial Project** "Inclusion Body Refolding Unit" with Bilfinger

2016-2019 Co-Project Leader **FWF Stand Alone Scientific Project** "Chalcone 3hydroxylase" P29552-B29 funded by the Austrian Science Fund FWF

2016-2019 **Industrial Project** "High-value added product in *E. coli*" with Atabay Kimya Sanayi ve Ticaret

2016-2019 Project Partner in the **EU project ERA-IB-15-029** CrossCat "Symbiosis of bio- and chemo-catalysts for the sustainable conversion of hemicelluloses"

2014-2019 **Industrial Project** „Quantitative Prozessentwicklung, Produktivitäts-Optimierung sowie Charakterisierung der Produktionsplattform" in cooperation with Sciotec Diagnostic Technologies GmbH

2015 **Industrial Project** „Novel bi-directional promotor systems for tuneable recombinant protein expression in *P. pastoris"* in cooperation with bisy GmbH

2015 **Industrial Project** „HRP from *E. coli*" in cooperation with Hy2Care

2013-2017 **Module Leader** of the **CD Laboratory Module** "Development of an all-in-one methodology for downstream processing and concomitant impurity monitoring"

2011-2015 Junior Faculty Member of the TU Wien **Doctorate Program** on "Catalysis Materials and Technology (CatMat)" (http://catmat.tuwien.ac.at)

2012-2015 **FWF Stand Alone Scientific Project** "Glycoengineered horseradish peroxidase for targeted cancer treatment" P24861-B19 funded by the Austrian Science Fund FWF (http://fwf.ac.at/asp/projekt_res.asp)

2011-2012 **Industrial Project** "Bulk- und Intermediate-Freezing von Proteinen" in cooperation with the Institut für Luft- und Kältetechnik ILK Dresden

List of publications

Scientific Peer-Reviewed Papers

1. **Spadiut O.**, Leitner C., Tan TC., Ludwig R., Divne C. and Haltrich D. "Mutations of Thr169 affect substrate specificity of pyranose 2-oxidase from *Trametes multicolor*" *Biocatal. Biotrans.* 2007, 26: 120-127. doi:10.1080/10242420701789320

2. Abolmaali S., Mitterbauer R., **Spadiut O.**, Peruci M., Weindorfer H., Lucyshyn D., Ellersdorfer G., Lemmens M., Moll WD. and Adam G. "Engineered baker's yeast as a sensitive bioassay indicator organism for the trichothecene toxin deoxynivalenol" *J. Microbiol. Methods* 2008, 72: 306-312. doi: 10.1016/j.mimet.2007.12.013

3. **Spadiut O.**, Pisanelli I., Maischberger T., Salaheddin C., Peterbauer C., Gorton L. and Haltrich D. "Engineering of pyranose 2-oxidase: improvement for biofuel cell and food applications through semi-rational protein design" *J. Biotechnol.* 2009, 5: 250-257. doi: 10.1016/j.jbiotec.2008.11.004

4. **Spadiut O.**, Leitner C., Salaheddin C., Varga B., Vertessy B., Tan TC., Divne C. and Haltrich D. "Improving thermostability and catalytic activity of pyranose 2-oxidase from *Trametes multicolor* by rational and semi-rational design" *FEBS J.* 2009, 276: 776-792. doi: 10.1111/j.1742-4658.2008.06823.x

5. **Spadiut O.**, Radakovits K., Pisanelli I., Salaheddin C., Yamabhai M., Tan TC., Divne C. and Haltrich D. "A thermostable triple mutant of pyranose 2-oxidase from *Trametes multicolor* with improved properties for biotechnological applications" *Biotechnol. J.* 2009, 4: 525-534. doi: 10.1002/biot.200800260

6. Salaheddin C., **Spadiut O.**, Ludwig R., Tan TC., Divne C., Haltrich D. and Peterbauer C. "Probing active-site residues of pyranose 2-oxidase from *Trametes multicolor* by semi-rational protein design" *Biotechnol. J.* 2009, 4: 535-543. doi: 10.1002/biot.200800265

7. Pisanelli I., Kujawa M., **Spadiut O.**, Kittl R., Halada P., Volc J., Mozuch MD., Kersten P., Haltrich D. and Peterbauer C. "Pyranose 2-oxidase from *Phanerochaete chrysosporium* – expression in *E. coli* and biochemical characterization" *J. Biotechnol.* 2009, 142: 97-106. doi: 10.1016/j.jbiotec.2009.03.019

8. Pisanelli I., Kujawa M., Gschnitzer D., **Spadiut O.**, Seiboth B. and Peterbauer CK. "Heterologous expression of an *Agaricus meleagris* pyranose dehydrogenase-encoding gene in *Aspergillus spp.* and characterization of the recombinant enzyme" *Appl. Microbiol. Biotechnol.* 2010, 86: 599-606. doi: 10.1007/s00253-009-2308-x

9. **Spadiut O.,** Brugger D., Coman V., Haltrich D. and Gorton L. "Engineered pyranose 2-oxidase: efficiently turning sugars into electrical energy" *Electroanalysis* 2010, 7-8: 813-820. doi: 10.1002/elan.200980015

10. Pitsawong W., Sucharitakul J., Prongjit M., Tan TC., **Spadiut O.,** Haltrich D., Divne C. and Chaiyen P. "A conserved active-site threonine is important for both sugar and flavin oxidations of pyranose 2-oxidase" *J. Biol. Chem.* 2010, 285: 9697-9705. doi: 10.1074/jbc.M109.073247

11. **Spadiut O.**, Posch G., Ludwig R., Haltrich D. and Peterbauer CK. "Evaluation of different expression systems for the heterologous expression of pyranose 2-oxidase from *Trametes multicolor* in *E. coli*" *Microb. Cell Fact.* 2010, 9: 14. doi: 10.1186/1475-2859-9-14

12. **Spadiut O.**, Nguyen T. and Haltrich D. "Thermostable variants of pyranose 2-oxidase showing altered substrate selectivity for glucose and galactose" *J. Agric. Food Chem.* 2010, 58: 3465-3471. doi: 10.1021/jf9040047

13. **Spadiut O.**, Tan TC., Pisanelli I., Haltrich D. and Divne C. "Importance of the gating segment in the substrate-recognition loop of pyranose 2-oxidase" *FEBS J.* 2010, 277: 2892-2909. doi: 10.1111/j.1742-4658.2010.07705.x

14. Salaheddin C., Takakura Y., Tsunashima M., Stranzinger B., **Spadiut O**., Yamabhai M., Peterbauer CK. and Haltrich D. "Characterisation of recombinant pyranose oxidase from the cultivated mycorrhizal basidiomycete *Lyophyllum shimeji* (*hon-shimeji*)" *Microb. Cell Fact.* 2010, 9: 57. doi: 10.1186/1475-2859-9-57

15. Tan TC., Pitsawong W., Wongnate T., **Spadiut O**., Haltrich D., Chaiyen P. and Divne C. "H-bonding and positive charge at the N5/O4 locus are critical for covalent flavin attachment in trametes pyranose 2-oxidase" *J. Mol. Biol.* 2010, 402: 578-594. doi: 10.1016/j.jmb.2010.08.011

16. **Spadiut O.**, Olsson L. and Brumer H. "A comparative summary of expression systems for the recombinant production of galactose oxidase" *Microb. Cell Fact.* 2010, 9: 68. doi: 10.1186/1475-2859-9-68

17. Dietzsch C., **Spadiut O.** and Herwig C. "A dynamic method based on the specific substrate uptake rate to set up a feeding strategy for *Pichia pastoris*" *Microb. Cell Fact.* 2011, 10: 14. doi: 10.1186/1475-2859-10-14

18. **Spadiut O.**, Ibatullin FM., Peart J., Gullfot F., Martinez-Fleites C., Ruda M., Xu C., Sundqvist G., Davies GJ. and Brumer H. "Building custom polysaccharides *in vitro* with a new glycosynthase and a glycosyltransferase" *J. Am. Chem. Soc.* 2011, 133: 10892-10900. doi: 10.1021/ja202788q

19. **Spadiut O.**, Ariza A., Eklöf J., Offen W.A., Roberts S.M., Besenmatter W., Friis E.P., Skjot M., Wilson K.S., Brumer H. and Davies GJ. "Structure and activity of a *Paenibacillus polymyxa* xyloglucanase from glycoside hydrolase family 44" *J. Biol. Chem.* 2011, 286: 33890-33900. doi: 10.1074/jbc.M111.262345

20. Dietzsch C., **Spadiut O.** and Herwig C. "A fast approach to determine a fed batch feeding profile for recombinant *Pichia pastoris* strains" *Microb. Cell Fact.* 2011, 10: 85. doi: 10.1186/1475-2859-10-85

21. Pisanelli I., Wuehrer P., Reyes-Dominguez Y., **Spadiut O.**, Haltrich D. and Peterbauer C. „Heterologous expression and biochemical characterization of novel pyranose 2-oxidases from the ascomycetes *Aspergillus nidulans* and *Aspergillus oryzae*" *Appl. Microbiol. Biotechnol.* 2012, 93: 1157-1166. doi: 10.1007/s00253-011-3568-9

22. Bi R., **Spadiut O.**, Lawoko M., Brumer H. and Henriksson G. **"**Isolation and identification of microorganisms from soil able to live on lignin as carbon source and produce enzymes which cleave β-O-4 bond in a lignin model compound" *Cellulose Chem. Technol.* 2012, 46: 227-242.

23. Krainer FW., Dietzsch C., Hajek T., Herwig C, **Spadiut O.*** and Glieder A. "Recombinant protein expression in *Pichia pastoris* strains with an engineered methanol utilization pathway" *Microb. Cell Fact.* 2012, 11: 22. doi: 10.1186/1475-2859-11-22
**corresponding author; highly accessed paper*

24. **Spadiut O.**, Dietzsch C., Posch AE and Herwig C. "Evaluation and application strategy for online sampling probes" *Eng. Life Sci.* 2012, 5: 507-513. doi: 10.1002/elsc.201100228

25. Zalai D., Dietzsch C., Herwig C. and **Spadiut O.*** "A dynamic fed batch strategy for a *Pichia pastoris* mixed feed system to increase process understanding" *Biotechnol. Prog.* 2012, 28: 878-886. doi: 10.1002/btpr.1551
**corresponding author*

26. Xu C., **Spadiut O.**, Araújo AC., Nakhai A. and Brumer, H. "Chemo-enzymatic assembly of clickable cellulose surfaces via multivalent polysaccharides" *ChemSusChem* 2012, 4: 661-665. doi: 10.1002/cssc.201100522

27. Posch AE, **Spadiut O.** and Herwig C. "A novel method for fast and statistically verified morphological characterization of filamentous fungi" *Fungal Genet. Biol.* 2012, 49: 499-510. doi: 10.1016/j.fgb.2012.05.003

28. Dietzsch C., **Spadiut O.** and Herwig C. "On-line multiple component analysis for efficient quantitative bioprocess development" *J. Biotechnol.* 2013, 163: 362-370**.** doi: 10.1016/j.jbiotec.2012.03.010

29. Posch AE, **Spadiut O.** and Herwig C. "Switching industrial production processes from complex to defined media: Method development and case study using the example of *Penicillium chrysogenum*" *Microb. Cell Fact.* 2012, 11: 88. doi: 10.1186/1475-2859-11-88

30. Guerriero G., **Spadiut O.**, Kerschbamer C., Giorno F., Baric S. and Ezcurra I. "Analysis of cellulose synthase genes from domesticated apple identifies collinear genes *WDR53* and *CesA8A*: partial coexpression, bicistronic mRNA and alternative splicing of CESA8A" *J. Exp. Bot.* 2012, 63: 6045-6056. doi: 10.1093/jxb/ers255

31. **Spadiut O.**, Rittmann S., Dietzsch C. and Herwig C. "Dynamic conditions in bioprocess development" *Eng. Life Sci.* 2013, 1: 88-101. doi.org/10.1002/elsc.201200026

32. **Spadiut O.***, Rossetti L., Dietzsch C. and Herwig C. "Purification of a recombinant plant peroxidase produced in *Pichia pastoris* by a simple 2-step strategy" *Protein Expr. Purif.* 2012, 86: 89-97. doi: 10.1016/j.pep.2012.09.008
**corresponding author*

33. Seidl-Seiboth V., Zach S., Frischmann A., **Spadiut O.,** Dietzsch C., Herwig C., Ruth C., Rodler A., Jungbauer A. and Kubicek C. "Spore germination of *Trichoderma atroviride* is inhibited by its LysM protein TAL6" *FEBS J.* 2013, 280: 1226-1236. doi: 10.1111/febs.12113

34. Frischmann A., Neudl S., Gaderer R., Bonazza K., Zach S., Gruber S., **Spadiut O.,** Friedbacher G., Grothe H. and Seidl-Seiboth V. "Self-assembly at air/water interfaces and carbohydrate-binding properties of the small secreted protein EPL1 from the fungus *Trichoderma atroviride*" *J. Biol. Chem.* 2013, 288: 4278-4287. doi: 10.1074/jbc.M112.427633

35. **Spadiut O**., Tan TC., Wongnate T., Sucharitakul J., Krondorfer I., Sygmund C., Haltrich D., Chaiyen P., Peterbauer C. and Divne C. "The 1.6 A crystal structure of pyranose dehydrogenase from *Agaricus meleagris* rationalizes substrate specificity and reveals a flavin intermediate" *PlosOne* 2013, 8: e53567. doi: 10.1371/journal.pone.0053567

36. Posch A.E., Herwig C. and **Spadiut O.*** "Science-based bioprocess design for filamentous fungi" *Trends Biotechnol.* 2013, 31: 37-44. doi: 10.1016/j.tibtech.2012.10.008
**corresponding author*

37. **Spadiut O.*** and Herwig C. "Production and purification of the multifunctional enzyme horseradish peroxidase: a review" *Pharm. Bioprocess.* 2013, 1: 283-295. doi:10.4155/pbp.13.23
**corresponding author*

38. Krainer FW., Gmeiner C., Neutsch L., Windwarder M., Pletzenauer R., Herwig C., Altmann F., Glieder A. and **Spadiut O.*** „Knockout of an endogenous mannosyltransferase increases the homogeneity of glycoproteins produced in *Pichia pastoris" Sci. Rep.* 2013, 3: 3279. doi: 10.1038/srep03279
**corresponding author*

39. Hassan N., Tan T.C., **Spadiut O**., Pisanelli I., Fusco L., Haltrich D., Peterbauer C. and Divne C. "Crystal structures of *Phanerochaete chrysosporium* pyranose 2-oxidase suggest that the N-terminus acts as a propeptide that assists in homotetramer assembly" *FEBS Open Bio,* 2013, 3: 496-504. doi: 10.1016/j.fob.2013.10.010

40. **Spadiut O.**, Capone S., Krainer F., Glieder A. and Herwig C. "Microbials for the production of monoclonal antibodies and antibody fragments" *Trends Biotechnol.,* 2014, 32: 54-60. doi: 10.1016/j.tibtech.2013.10.002

41. Sagmeister P., Schimek C., Meitz A., Herwig C. and **Spadiut O.*** „Tunable recombinant protein production with *E. coli* in a mixed feed environment" *Appl. Microbiol. Biotechnol.*, 2014, 98: 2937-2945. doi: 10.1007/s00253-013-5445-1
**corresponding author*

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153. Kopp J., Bayer B., Slouka C., Striedner G., Dürkop M. and **Spadiut O.** "Fundamental insights in early-stage inclusion body formation" *Microb. Biotechnol*., 2022, doi: 10.1111/1751-7915.14117

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155. Knežević K., Rastädter K., Quehenberger J., **Spadiut O**., Krampe J. and Kreuzinger N. "Circular production – Evaluation of membrane technologies for nutrient recycling from a microbial fermentation effluent ", *J. Cleaner Production*, 2022, doi: 10.1016/j.jclepro.2022.134436

156. Kittler S., Ebner J., Besleaga M., Larsbrink J., Darnhofer B., Birner-Grünberger R., Schobesberger S., Akhgar CK., Schwaighofer A., Lendl B. and **Spadiut O. *** "Recombinant Protein L: Production, Purification and Characterization of a Universal Binding Ligand", *J. Biotechnol.*, 2022, doi: 10.1016/j.jbiotec.2022.10.002
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Patents

1. Reinsch H., Heidingsfelder J., **Spadiut O.** and Herwig C. „Verfahren zur Ermittlung von Gefrierschäden von wässrigen Produktlösungen beim Einfrierprozess"; Patent No. 2013090414255500 DE

2. Quehenberger J., Wurm D. and **Spadiut O**. „Method for producing a composition comprising archaeal lipids from a *Sulfolobus* cell culture"; Patent No. WO2020/187526 A1

3. Humer D. and **Spadiut O.** "HRP Mutant"; Patent No. EP 20167727.5

4. Humer D., Ebner J. and **Spadiut O.** "HRP Inclusion Body Process"; Patent No. EP 20167716.8

5. Sedlmayr V., Quehenberger J., **Spadiut O**. and Wurm D. "Lipid nanoparticle with nucleic acid cargo"; Patent No. EP22196901.7

Invited Talks

1. Spadiut O. (2008) "Genetic engineering of the carbohydrate oxidase pyranose 2-oxidase from *Trametes multicolor*", 12th Austrian Carbohydrate Workshop, Feb 21, 2008, University of Natural Resources and Applied Life Sciences BOKU, Vienna, Austria

2. Spadiut O. (2009) "Pyranose 2-oxidase: playground for enzyme evolution", 1st annual meeting of the Austrian Association of Molecular Life Sciences and Biotechnology ÖGMBT, Sept 21, 2009, Innsbruck, Austria

3. Spadiut O. (2011) "Building custom polysaccharides *in vitro* with a new glycosynthase and a glycosyltransferase", Gordon Research Conference GRC on Cellulosomes, Cellulases & Other Carbohydrate Modifying Enzymes, July 24-29, 2011, Stonehill College, Easton, MA, USA

4. Spadiut O. (2011) "A comparative summary of expression systems for the heterologous expression of galactose oxidase", PEGS Europe - Protein & Antibody Engineering Summit, Oct 11-13, 2011, Hannover, Germany

5. Spadiut O. (2012) "Playing with the methanol utilization pathway in *Pichia pastoris*", Pichia 2012, Feb 29 - March 03, 2012, Alpbach, Austria

6. Spadiut O. (2012) "Efficient purification of a recombinant plant peroxidase by a mixed-mode resin", ISPPP 2012, Sept 26-29, 2012, Istanbul, Turkey

7. Spadiut O. (2013) "Stability studies with the multifunctional enzyme horseradish peroxidase", IIR Cryoworkshop 2013, Sept 04-05, 2013, Dresden, Germany

8. Spadiut O. (2014) "Knockout of an endogenous mannosyltransferase increases the homogeneity of glycoproteins produced in *Pichia pastoris*", Pichia 2014, March 02-05, 2014, San Diego, USA

9. Spadiut O. (2014) "Purification and biochemical characterization of 19 recombinant plant peroxidase isoenzymes produced in *Pichia pastoris*", Monolith Summer School 2014, May 30-June 4, 2014, Portoroz, Slovenia

10. Spadiut O. (2014) "Efficient DSP for hyperglycosylated proteins from yeast", Bioproduction, Oct 08-09, 2014, Barcelona, Spain

11. Spadiut O. (2015) "Horseradish Peroxidase – from Genome to Protein", 12th International Life Science Meeting, April 15-17, 2015, Krems, Austria

12. Spadiut O. (2015) "Development of a novel feeding strategy for an industrial yeast strain", 5th Annual Bioproduction: Scale, Bioreactors and Disposables, Aug 5-6, 2015, Boston, USA

13. Spadiut O. (2015) "Monoliths as PAT tools for bioprocess improvement", CHI's 7th Annual PEGS Europe, Nov 5-6, Lisbon, 2015, Portugal

14. Spadiut O. (2016) "Horseradish Peroxidase – from genome to protein", XI Meeting of young Chemical Engineers, Feb 18-19, 2016, Zagreb, Croatia

15. Spadiut O. (2016) "Development of a fed-batch process for a recombinant *Pichia pastoris* Δ och1 strain expressing a plant peroxidase", Pichia 2016, April 3-6, 2016, Antalya, Turkey

16. Spadiut O. (2016) "A novel PAT toolbox to facilitate monitoring of *E. coli* bioprocesses", Monolith Summer School 2016, May 27-June 1, 2016, Portoroz, Slovenia

17. Spadiut O. (2016) "Identification of interaction effects between unit operations", Workshop on Methods for Accelerating Scalable Bioprocess Development, Nov 09-11, 2016, Vienna, Austria

18. Spadiut O. (2016) "Continuous Bioprocessing - status quo and challenges", European Antibody Congress, Nov 14-16, 2016, Basel, Switzerland

19. Spadiut O. (2016) "A novel tandem Fab against coeliac disease", European Antibody Congress, Nov 14-16, 2016, Basel, Switzerland

20. Spadiut O. (2017) "Freezing effects on monoclonal antibodies in ZETA's scale down systems", ZETA Symposium 2017, January 25-26, 2017, Lieboch, Austria

21. Spadiut O. (2017) "Can a novel monitoring tool based on chromatogram fingerprinting help in enabling continuous bioprocessing?", 10th annual BioInnovation Leaders Summit GBX Summits, February 7-9, 2017, Berlin, Germany

22. Spadiut O. (2017) A novel toolbox for monitoring inclusion body processing", Cell Culture and Downstream World Congress 2017, February 21-23, 2017, Munich, Germany

23. Spadiut O. (2017) "How to tune recombinant protein production in *E. coli* for enhanced production of biopharmaceuticals", Biotechnology and Biotech Industries Meet, March 20-22, 2017, Rome, Italy

24. Spadiut O. (2017) "How Induction Impacts Inclusion Body Properties and Inclusion Body Processing in *E. coli*", 14th International Life Science Meeting, April 5-7, 2017, Krems, Austria

25. Spadiut O. (2017) „Glycoengineering of Biopharmaceuticals by using Glycoengineered Yeasts", CBM12, April 22-26, 2017, Vienna, Austria

26. Spadiut O. (2017) „How Induction Impacts Inclusion Body Properties and Inclusion Body Processing in *E. coli*", PEGS – Protein Expression Strategies, May 2-5, 2017, Boston, USA

27. Spadiut O. (2017) "A novel monitoring tool based on chromatogram fingerprinting as potential enabler of continuous bioprocessing", Biotech 2017, September 7-8, 2017, Wädenswil, Switzerland

28. Spadiut O. (2017) "The production of a novel scFv against coeliac disease – from gene to final product", European Antibody Congress, Oct 31-Nov 2, 2017, Basel, Switzerland

29. Spadiut O. (2018) "Continuous Bioprocessing – how can it be done?", ZETA Symposium 2018, March 6-8, 2018, Seggau, Austria

30. Spadiut O. (2018) "A novel Fab against celiac disease – from IB to product formulation", Bioprocessing Summit, March 20-23, 2018, Lisbon, Portugal

31. Spadiut O. (2018) "Inclusion Bodies – more than just waste!", 22nd edition of International Conference on Biotechnology, April 16-17, 2018, Amsterdam, Netherlands

32. Spadiut O. (2018) "Chromatogram fingerprinting to follow integrated bioprocesses", World Advanced Therapies and Regenerative Medicine, May 16-18, 2018, London; UK

33. Spadiut O. (2018) „Production of Fabs in *E. coli* – a comparison of expression systems", BioProduction 2018, October 9-10, 2018, Dublin, Ireland

34. Spadiut O. (2019) „The time has come – more control in IB processing", Bioprocessing Summit, March 19-21, 2018, Lisbon, Portugal

35. Spadiut O. (2019) „The time has come to bring QbD to inclusion body processing“, Bioprocess International Europe, April 2-5, 2019, Vienna, Austria

36. Spadiut O. (2019) „A tricky endevaour : production of membrane-bound P450s“, PEGS Europe 2019, Protein Purification Technologies, November 21-22, 2019, Lisbon, Portugal

37. Spadiut O. (2020) „Inclusion Body Processing: A REAL Black Box Case Study“, PEGS Europe Virtual Event 2020, Protein Purification Technologies, November 9-12, 2020, virtual

38. Spadiut O. (2021) „Extracellular protein production with *E. coli* – how can it be done and what does it really bring for the DSP?“, BioProcessing Summit Europe Virtual, March 16-17, 2021, virtual

39. Spadiut O. (2021) „NovoArc – Health without needles“, Biovaria, April 26-28, 2021, virtual

40. Spadiut O. (2021) „Scalable and efficient recombinant production of the versatile plant enzyme horseradish peroxidase“, BioTalk, September 21-22, 2021, virtual

41. Spadiut O. (2021) „Extracellular protein production with *E. coli* – how can it be done and what does it really bring for the DSP?“, PEGS Europe Protein and Antibody Engineering Summit, November 2-4, 2021, Barcelona, Spain

42. Spadiut O. (2022) „A Peroxidase from Inclusion Bodies as Tool in Cancer Treatment“, Bioprocessing Summit Europe, March 22-24, 2022, Barcelona, Spain