

# Dr. Wolfgang Esser-Skala

BSc uPM B. rer. nat. MA. rer. nat.

## Curriculum vitae

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## Personal details

born 26 September 1984 in Schärding (Upper Austria)  
Nationality Austria  
Family status married, four children

## Experience

- since 2017-06 **Postdoc**, *Christian Doppler Laboratory for Innovative Tools for Biosimilar Characterization at the University of Salzburg*, Faculty of Natural Sciences, Department of Biosciences, Hellbrunner Straße 34, 5020 Salzburg.
- Setup and implementation of algorithms and workflows for biosimilar analysis (see publications for recent research projects)
  - High-throughput data analysis consultation and training for scientists and research assistants
  - Teaching (big data and research data management, data visualization)
  - Implementation of IPMA-compliant project management structures to organize scientific conferences, which were applied to organize the Austrian Proteomics and Metabolomics Research Symposium 2019
  - Webmaster for the pages of, *i. a.*, the CD Lab (<http://cdl-biosimilars.sbg.ac.at/>), the Doctoral College Immunity in Cancer & Allergy (<http://ica.sbg.ac.at/>), and the Allergy Cancer BioNano Research Centre (<http://acbn.sbg.ac.at/>)
- 2014-09 to 2017-05 **Assistant to the CEO**, *Pointner & Rothschädl Ges.m.b.H.*, Münchner Bundesstraße 121, 5020 Salzburg.
- Managerial accounting and business reporting
  - Support and customization of the company's ERP software
  - Financial accounting for eleven group companies based in seven European countries
  - Preparation of separated and consolidated financial statements
- 2010-10 to 2014-06 **PhD student**, *Structural Biology Group at the University of Salzburg*, Faculty of Natural Sciences, Department of Molecular Biology, Billrothstraße 11, 5020 Salzburg.
- Biochemical and structural characterization of kallikrein-related peptidase 2
  - Tutor for laboratory and mathematics courses
- since 2003-10 **Emergency medical technician**, *Austrian Red Cross, National Association Upper Austria*, District Office Schärding, Othmar-Spanlang-Straße 2, 4780 Schärding.
- Emergency medical technician with permission to drive ambulance vehicles
  - Practical instructor
  - Leadership training levels 1 and 2
  - Critical incident stress management peer
  - Community service from 2003-10 to 2004-09, volunteer since 2004-10

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## Education

- 2018-04 to 2019-06 Academic Project Manager  
(SMBS – University of Salzburg Business School,  
in cooperation with next level consulting)  
passed *with distinction*
- 2011-03 to 2015-02 Bachelor's degree program of Business Administration and Economics  
(FernUniversität in Hagen)  
passed with final grade *Sehr gut (1,1)*
- 2010-09 to 2014-09 Doctoral study of Natural Sciences  
(University of Salzburg, Department of Molecular Biology)  
*Promotio sub auspiciis Praesidentis rei publicae*
- 2013-09 to 2014-04 Financial accountant (Wifi Salzburg)  
passed *with distinction*
- 2008-10 to 2010-08 Joint Master's degree program of Molecular Biology  
(University of Salzburg, University of Linz)  
passed *with distinction*
- 2005-10 to 2008-09 Joint Bachelor's degree program of Molecular Biosciences  
(University of Salzburg, University of Linz)  
passed *with distinction*
- 2004-10 to 2005-09 One semester of Organ Performance (Anton Bruckner University Linz)  
and of Musicology and Dance Studies (University of Salzburg)
- 2003-10 to 2003-11 Emergency medical technician (§ 9 SanG)  
passed *with distinction*
- 1995-09 to 2003-06 Secondary school Schärding  
school leaving examination passed *with distinction*

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## Skills

- Language – German (native)  
– English (fluent)
- Computer – Expert knowledge of R, Python,  $\LaTeX$  and LilyPond  
– Practical knowledge of Java, HTML/CSS  
– Sound knowledge of MS Office including VBA programming
- Project management IPMA Level D Certified Project Management Associate
- Teaching HSD\* (Course in academic instruction)
- Music – Continuo player (organ, harpsichord) of the *Cantorey der Kirche der Barmherzigen Brüder Schärding* since 2004-03  
– Expert in realization of figured bass notation according to 18th century practice  
– Editor of practical editions of 18th/19th century sacral music
- Driver's license B

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## Bibliography

### I Peer-reviewed publications

Esser-Skala W, Segl M, Wohlschlager T, Reisinger V, Holzmann J & Huber CG (2020). Exploring data evaluation strategies for enhanced identification of host cell proteins in drug products of therapeutic antibodies and Fc-fusion proteins.  
*submitted.*

Esser-Skala W, Regl C, Wohlschlager T & Huber CG (2020). A simple strategy to eliminate glycation bias in the relative quantification of protein N-glycosylation.  
*submitted.*

Regl C, Wohlschlager T, Esser-Skala W, Wagner I, Samonig M, Holzmann J & Huber CG (2019). Dilute-and-shoot analysis of therapeutic monoclonal antibody variants in fermentation broth: a method capability study.  
*mAbs* 11(3), 569–582.

Debela M, Magdolen V, Skala W, Elsässer B, Schneider EL, Craik CS, Biniossek ML, Schilling O, Bode W, Brandstetter H & Goettig P (2018). Structural determinants of specificity and regulation of activity in the allosteric loop network of human KLK8/neurosin.  
*Sci. Rep.* 8(1), 10705.

Wohlschlager T, Scheffler K, Forstenlehner IC, Skala W, Senn S, Damoc E, Holzmann J & Huber CG (2018). Native mass spectrometry combined with enzymatic dissection unravels glycoform heterogeneity of biopharmaceuticals.  
*Nat. Commun.* 9(1), 1713.

Skala W, Wohlschlager T, Senn S, Huber GE & Huber CG (2018). MoFi – A software tool for annotating glycoprotein mass spectra by integrating hybrid data from the intact protein and glycopeptide level.  
*Anal. Chem.* 90(9), 5728–5736.

Guo S, Skala W, Magdolen V, Briza P, Biniossek ML, Schilling O, Kellermann J, Brandstetter H & Goettig P (2016). A single glycan at the 99-loop of human kallikrein-related peptidase 2 regulates activation and enzymatic activity.  
*J. Biol. Chem.* 291(2), 593–604.

Skala W, Utzschneider DT, Magdolen V, Debela M, Guo S, Craik CS, Brandstetter H & Goettig P (2014). Structure-function analyses of human kallikrein-related peptidase 2 establish the 99-loop as master regulator of activity.  
*J. Biol. Chem.* 289(49), 34267–34283.

Guo S, Skala W, Magdolen V, Brandstetter H & Goettig P (2014). Sweetened kallikrein-related peptidases (KLKs): Glycan trees as potential regulators of activation and activity.  
*Biol. Chem.* 395(9), 959–976.

Skala W, Goettig P & Brandstetter H (2013).

Do-it-yourself histidine-tagged bovine enterokinase: A handy member of the protein engineer's toolbox.

*J. Biotechnol.* 168(4), 421–425.

## 2 Theses

Organisation des Austrian Proteomics and Metabolomics Research Symposium 2019.

*Final thesis* (supervisor: Sabine Reithofer-Reinhardt), SMBS, 2019.

Die Lösung des restringierten Steinerbaum-Problems mittels lokaler Suchverfahren.

*Bachelor thesis* (supervisor: Friedhelm Kulmann), FernUniversität in Hagen, 2015.

Biochemical and structural characterization of human kallikrein-related peptidase 2 activated by do-it-yourself histidine-tagged bovine enterokinase.

*PhD thesis* (supervisors: Hans Brandstetter and Peter Goettig), University of Salzburg, 2014.

Die Bahnsteigzuordnung als Teilproblem des Railway Scheduling. Seminar „Metaheuristiken zur Lösung kombinatorischer Optimierungsprobleme mit Anwendungen zur Transport- und Verkehrsoptimierung“.

*Term paper* (supervisor: Friedhelm Kulmann), FernUniversität in Hagen, 2014.

Putative macaque and orangutan homologues of tripeptidyl-peptidase II underline the importance of its C-terminal part for enzymatic activity and proper oligomerization.

*Master thesis* (supervisor: Hans Brandstetter), University of Salzburg, 2010.

Crystallization: From art to science.

*Bachelor thesis* (supervisor: Hans Brandstetter), University of Salzburg, 2008.

Determining the current-voltage characteristic: An electrophysiological study on Aquaporin-6.

*Bachelor thesis* (supervisor: Peter Pohl), Johannes Kepler University Linz, 2007.

## 3 Miscellaneous

The *pgfgantt* package v5.0.

L<sup>A</sup>T<sub>E</sub>X package, 2018 (CTAN: <http://www.ctan.org/pkg/pgfgantt>).

more than fifty *practical editions of 18th/19th century sacral music*, most of them licensed under the CC BY-NC-SA 4.0 International License, available *via* the International Music Score Library Project ([http://imslp.org/wiki/Category:Skala,\\_Wolfgang](http://imslp.org/wiki/Category:Skala,_Wolfgang)).