

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

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*

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

Bibliography

1 Peer-reviewed publications

Esser-Skala W, Wohlschlager T & Huber CG (2020).

In search for the needle in the Mariana Trench: host cell proteins and the problem of dynamic range.

LC-GC Europe, accepted.

Esser-Skala W, Segl M, Wohlschlager T, Reisinger V, Holzmann J & Huber CG (2020).

Exploring sample preparation and data evaluation strategies for enhanced identification of host cell proteins in drug products of therapeutic antibodies and Fc-fusion proteins.

Anal. Bioanal. Chem. 412(24), 6583–6593.

chosen by the editors
as *Hot Paper* (“for its
importance in a
rapidly evolving field
of high current
interest”)

Esser-Skala W, Regl C, Wohlschlager T & Huber CG (2020).

A simple strategy to eliminate hexosylation bias in the relative quantification of *N*-glycosylation in biopharmaceuticals.

(Title of the German version: Eine einfache Strategie zur Korrektur des Fehlers aufgrund von Hexosylierung bei relativer Quantifizierung der *N*-Glykosylierungsvarianten von Biopharmazeutika.)

Angew. Chem. Int. Ed. Engl. 59(37), 16225–16232 and

Angew. Chem. 132(37), 16359–16367.

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^AT_EX package, 2018 (CTAN: <http://www.ctan.org/pkg/pgfgantt>).

more than 70 *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).