Curriculum Vitae et Studiorum

Prof. Dr. Ulrich Eberhard Matthias Schweizer

Professional training and positions:

1992-1998	Study of Biochemistry at the University of Bayreuth, Germany
Nov.1996-Nov.1997	Special volunteer at the National Institutes of Health in Bethesda, MD, USA, Stroke Branch, NINDS under guidance of Dr. John Hallenbeck Stipends from Siemens Med-GT, Erlangen, and Hans-Krüger-Stiftung, Berlin
May 1998-Dec.1998	Diploma thesis, Institute for Biochemistry, Prof. Gerhard Krauss, Bayreuth, graduated as Diplom-Biochem. (univ.), grade 1.0 (hons)
Jan.1999-Apr.2002	Ph.D. thesis in the laboratory of Prof. Michael Sendtner, Würzburg, under the supervision of Prof. Martin Heisenberg (Genetics). Grade 1.11 (magna cum laude)
May 2002-Oct. 2002	Postdoc in Dept. Molecular Internal Medicine in Würzburg, Prof. Josef Köhrle
Nov. 2002-	Postdoc (DFG) at Institute for Experimental Endocrinology, Charité Berlin, Prof. Köhrle
2004-	Established a Junior group “Neurobiology of Selenium”, at the Neuroscience Research Center, Charité
Aug. 2004-	Staff Scientist/group leader at the Institute for Exp. Endocrinology, Charité-Universitätsmedizin Berlin
July 2005-2012	Project leader Collaborative Research Center 665, TP A7, extended 2009: A7-2
June 2010	Habilitation for Biochemistry at Charité-Universitätsmedizin Berlin. *Venia legendi* for biochemistry
January 2013	Professor of Biochemistry at Rheinische Friedrich-Wilhelms-Universität Bonn

Current Research interests:

- Functions of selenoproteins within the brain
- Biosynthesis of selenoproteins
- Catalytic mechanism of deiodinases
- Thyroid hormone transport via MCT8; response of mutant MCT8 to chemical chaperones
- tRNA modification (isopentenylation) and fidelity of translation (ribosomal profiling)

Memberships in academic societies:

Gesellschaft für Biochemie und Molekularbiologie (GBM)

Deutsche Gesellschaft für Endokrinologie (DGE)

Gesellschaft für Mineralstoffe und Spurenelemente (GMS)

European Society for Endocrinology (ESE)

European Thyroid Association (ETA).

Membership on editorial boards:

Journal of Trace Elements in Medicine and Biology

Frontiers in Endocrinology

Editor: with Hatfield, Gladyshev, Tsuji: Selenium: Its Molecular Biology and Role in Human Health, Springer. 4th edition 2016

Awards:

2006 Merck European Thyroid von Basedow Research Prize

2006 Young Investigator Award "Selenium in Biology and Medicine", Madison, WI

2007 Schrauzer Prize for research on selenium, German Society for Minerals and Trace Elements

2008 Young Investigator Award “Trace Elements in Man and Animals13“, Pucon, Chile

2009 Travel grant to American Thyroid Association Meeting at Palm Beach, FL.

Service to the scientific community:
Meeting organization:

10th International Symposium on Selenium in Biology and Medicine, Berlin, September 2013

61. Deutscher Kongress für Endokrinologie, Bonn, March 2018

Executive Board Member Deutsche Gesellschaft für Endokrinologie 2015-2018

Publications *as of March 2021*: orcid.org/0000-0003-1380-4780

Metrics acc. To Google Scholar:

- 100 Papers printed or in press
- 7800 citations
- h-index 52

Ten most important papers (not 10 most highly cited):

Seiler A, Schneider M, Förster H, Roth S, Wirth EK, Culmsee C, Plesnila N, Kremmer E, Rådmark O, Wurst W, Bornkamm GW, **Schweizer U***, Conrad M* (2008) Glutathione Peroxidase 4 Senses and Translates Oxidative Stress into 12/15-Lipoxygenase Dependent- and AIF-Mediated Cell Death. **Cell Metabolism** 8, 237–248
704 citations

Schomburg L*, Schweizer U*, Holtmann B, Flohé L, Sendtner M, Köhrle J (2003) Gene disruption discloses role of selenoprotein P in selenium delivery to target tissues. **Biochem J** 370: 397-402
438 citations

Ingold I, Berndt C, Schmitt S, Doll S, Poschmann G, Buday K, Roveri A, Peng X, Porto Freitas F, Seibt T, Mehr L, Aichler M, Walch A, Lamp D, Jastroch M, Miyamoto S, Wurst W, Ursini F, Arnér ESJ, Fradejas-Villar N, **Schweizer U**, Zischka H, Friedmann Angeli JP, Conrad M. (2018) Selenium Utilization by GPX4 Is Required to Prevent Hydroperoxide-Induced Ferroptosis. **Cell** 172(3):409-422.e21. doi: 10.1016/j.cell.2017.11.048.
261 citations

Schweizer U, Gunnersen J, Karch C, Wiese S, Holtmann B, Takeda K, Akira S, Sendtner M (2002) Conditional gene ablation of Stat3 reveals differential signaling requirements for survival of motoneurons during development and after nerve injury in the adult. **J Cell Biol** 156 (2): 287-297
222 citations

Wirth EK, Roth S, Blechschmidt C, Holter SM, Becker L, Racz I, Zimmer A, Klopstock T, Gailus-Durner V, Fuchs H, Wurst W, Naumann T, Bräuer A, de Angelis MH, Köhrle J, Grüters A, **Schweizer U** (2009) Neuronal 3 ',3,5-Triiodothyronine (T-3) Uptake and Behavioral Phenotype of Mice Deficient in Mct8, the Neuronal T-3 Transporter Mutated in Allan-Herndon-Dudley Syndrome. **J Neurosci** 29(30): 9439-9449
178 citations

Wirth EK, Conrad M, Winterer J, Wozny C, Carlson BA, Roth, S, Schmitz D, Bornkamm GW, Coppola V, Tessarollo L, Schomburg L, Kohrle J,Hatfield DL, **Schweizer U** (2010) Neuronal selenoprotein expression is required for interneuron development and prevents seizures and neurodegeneration. **FASEB JOURNAL** 24(3):844-852.
176 citations

Schweizer, Ulrich; Schlicker, Christine; Braun, Doreen; et al. (2013) Crystal structure of mammalian selenocysteine-dependent iodothyronine deiodinase suggests a peroxiredoxin-like catalytic mechanism **PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA** 111(29): 10526-10531
70 citations

Fradejas-Villar N, Seeher S, Anderson CB, Doengi M, Carlson BA, Hatfield DL, **Schweizer U**, Howard MT. (2017) The RNA-binding protein Secisbp2 differentially modulates UGA codon reassignment and RNA decay. **Nucleic Acids Res.** 45(7):4094-4107. doi: 10.1093/nar/gkw1255.
34 citations

Braun D, **Schweizer U**. (2017) The Chemical Chaperone Phenylbutyrate Rescues MCT8 Mutations Associated With Milder Phenotypes in Patients With Allan-Herndon-Dudley Syndrome. **Endocrinology** 158(3):678-691. doi: 10.1210/en.2016-1530.
17 citations

Zhao W, Bohleber S, Schmidt H, Seeher S, Howard MT, Braun D, Arndt S, Reuter U, Wende H, Birchmeier C, Fradejas-Villar N, **Schweizer U** (2019) Ribosome profiling of selenoproteins in vivo reveals consequences of pathogenic Secisbp2 missense mutations. **J Biol Chem.** 294(39):14185-14200. doi: 10.1074/jbc.RA119.009369
8 citations