

Dr. Anette Kaiser (née Schreiber)

Professional Career

Since 2017	Project leader “In vivo analysis of signal transduction of neuropeptide receptors in <i>C. elegans</i> ”, cooperation with Dr. S. Prömel, Medical Faculty
Since 2015	Postdoctoral Fellow, Leipzig University, Germany
2012	Research Stay with Prof. Hamm, Department of Pharmacology, VU, Nashville/TN, USA
2010	Research Stay with Prof. Meiler, Center for Structural Biology, VU, Nashville/TN, USA

Academic Training

2010–2015	Doctoral Studies in Biochemistry, Leipzig University, Germany; Member of integrated research training group “Protein Science”
2005–2010	Studies in Biochemistry, Leipzig University, Germany

Scientific Certificates

2015	Dissertation in Biochemistry, Leipzig University, Germany “Structural characterization of Neuropeptide Y Receptor Activation” (summa cum laude), Advisor: Prof. Beck-Sickinger
2010	Final degree in Biochemistry, Leipzig University, Germany Advisor: Prof. Beck-Sickinger

Most Important Publications (*corresponding author/ # shared first author)

- [1] Yang Z[#], Han S[#], Keller M[#], **Kaiser A[#]**, Bender BJ[#], Bosse M, Burkert K, Kögler LM, Wifling D, Bernhardt G, Plank N, Littmann T, Schmidt P, Yi C, Li B, Ye S, Zhang R, Xu B, Larhammar D, Stevens RC, Huster D, Meiler J, Zhao Q, Beck-Sickinger AG, Buschauer A, Wu B. Structural basis of ligand binding modes at the neuropeptide Y Y1 receptor. *Nature*. 2018; 556:520-4.
- [2] **Kaiser A^{*}**, Hempel C, Wanka L, Schubert M, Hamm HE, Beck-Sickinger AG. G Protein Preassembly Rescues Efficacy of W6.48 Toggle Mutations in Neuropeptide Y2 Receptor. *Mol Pharmacol*. 2018; 93:387-401.
- [3] Schmidt P, Bender BJ, **Kaiser A**, Gulati K, Scheidt HA, Hamm HE, Meiler J, Beck-Sickinger AG, Huster D. Improved in Vitro Folding of the Y2 G Protein-Coupled Receptor into Bicelles. *Front Mol Biosci*. 2018; 17:100.
- [4] Schrottke S, **Kaiser A**, Vortmeier G, Els-Heindl S, Worm D, Bosse M, Schmidt P, Scheidt HA, Beck-Sickinger AG, Huster D. Expression, Functional Characterization, and Solid-State NMR Investigation of the G Protein-Coupled GHS Receptor in Bilayer Membranes. *Sci Rep*. 2017; 7:46128.
- [5] Burkert K, Zellmann T, Meier R, **Kaiser A**, Stichel J, Meiler J, Mittapalli GK, Roberts E, Beck-Sickinger AG. A Deep Hydrophobic Binding Cavity is the Main Interaction for Different Y₂ R Antagonists. *ChemMedChem*. 2017; 12:75-85.
- [6] **Kaiser A[#]**, Müller P[#], Zellmann T[#], Scheidt HA, Thomas L, Bosse M, Meier R, Meiler J, Huster D, Beck-Sickinger AG, Schmidt P. Unwinding of the C-Terminal Residues of Neuropeptide Y is critical for Y₂ Receptor Binding and Activation. *Angew Chem Int Ed Engl*. 2015; 54:7446-9.
- [7] Schönauer S[#], **Kaiser A[#]**, Holze C, Babilon S, Koeberling J, Riedl B, and Beck-Sickinger AG. Fluorescently labeled adrenomedullin allows realtime monitoring of adrenomedullin receptor trafficking in living cells. *J Pept Sci*. 2015; 21:905-12.
- [8] Mäde V, Bellmann-Sickert K, **Kaiser A**, Meiler J, Beck-Sickinger AG. Position and length of fatty acids strongly affect receptor selectivity pattern of human pancreatic polypeptide analogues. *ChemMedChem*. 2014; 9:2463-74.
- [9] Witte K, **Kaiser A**, Schmidt P, Splith V, Thomas L, Berndt S, Huster D, Beck-Sickinger AG. Oxidative *in vitro* folding of a cysteine deficient variant of the G protein-coupled neuropeptide Y receptor type 2 improves stability at high concentration. *Biol Chem*. 2013; 394:1045-56.
- [10] **Schreiber A**, Schramm P, Hofmann HJ. How many hydrogen-bonded α -turns are possible? *J Mol Model*. 2011; 17:1393-400.