

Education

*09/2017 - 09/2009	PhD/ doctoral student , Johannes Gutenberg University, Mainz (*Elternzeit: 07/2015 - 10/2016) <i>Grade: magna cum laude</i>
09/2009 - 03/2004	State exam Biology & Geography , Johannes Gutenberg University, Mainz <i>Grade: very good</i>
03/2009 - 10/2001	Diplom Biology , Johannes Gutenberg University, Mainz <i>Grade: very good</i>
06/2001	Abitur , Hildegardisschule, Bingen <i>Grade: good</i>

Professional Career and Qualifications

since 09/2021	Scientist / Postdoc Inst. of Developmental and Neurobiology, Functional Neurobiology, AG Heine <i>Analysis of subsynaptic localization of L- and R- type VGCCs as well as Ca²⁺ sensors using STED and electron microscopy of CRISPR-Cas9 modified endogenous proteins; Validation of their contribution to mid- and long-term presynaptic homeostatic plasticity in central synapses by Ca²⁺ imaging combined with pharmaceutical treatments and knockout conditions.</i>
01/2021 - 08/2021	Scientist / Postdoc Inst. of mol. Physiol., Molecular- and Cell Biology, AG Wolfrum <i>Analysis of in situ interactions on retinal cryosections using proximity localization. Macro writing / generation of pipelines for automated quantitative analysis of immunofluorescence microscopy images via ImageJ; writing of publications and grant proposals; lab organization</i>
09/2020 - 01/2020	Student Teacher at Secondary School Studienseminar Bad Kreuznach <i>Designing and didactic processing of educational content; performance evaluation</i>
01/2020 - 04/2018	Scientist / Postdoc Inst. of mol. Physiol., Molecular- and Cell Biology, AG Wolfrum <i>Analysis of the interactions between Usher syndrome proteins and intracellular transport modules. We found that the Usher syndrome protein Ush1g directly interacts with molecules of the intraflagellar transport (IFT) module and lack of Ush1g causes disruption IFT molecule localization in photoreceptor cells of Ush1g deficient mice. Project development; development of new methods for separation of retinal cell layers; organization of an international Conference (USH2018); organization of team meetings; scientific support in writing of publications and grant proposals; supervision of bachelor-</i>

and PhD- students; content design and supervision of the course „Molecular cell biology“; lab organization

09/2017
- 09/2009

PhD student (*Grade: magna cum laude*)

Inst. of mol. Physiol., Molecular- and Cell Biology, AG Wolfrum

Thesis: „Charakterisierung Ciliopathie-assoziiierter Proteinnetzwerke in Photorezeptorzellen“.

Characterization of ciliopathy related Fam161a: impact in microtubule stability and function in primary cilia and in photoreceptor cells.

Identification of novel interactions within the Usher syndrome protein interactome and their interruption caused by pathogen human mutations.

Analysis of protein-protein interactions via biochemistry and microscopy (PLA, FRET), immunohistochemistry and –cytochemistry; light & electron microscopy; siRNA knockdown; generation and validation of primary antibodies; analysis of pathogen human mutations on protein level; phenotypic characterization of mouse models of retinal degeneration; establishment of the Proximity Ligation Assay (PLA) on unfixed retinal cryosections; organization of mouse lines; maintenance of the microscopy-unit; supervision of bachelor- (4), master- (2) and diploma students (1)

03/2009
- 10/2001

Diploma Thesis (*Grade: Very good*)

Inst. of mol. Physiol., Molecular- and Cell Biology, AG Wolfrum

Thesis: „Validierung der Interaktionen zwischen dem USH1G Protein SANS und den putativen Bindeproteinen p150^{Glued} und Cep290“.

Analysis of protein-protein interactions via biochemical methods; bacteria- and cell culture; immunohistochemistry and electron microscopy of murine retinae