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Curriculum vitae

- since 2009 Member, Board of Directors, NeuroCure Cluster of Excellence
- since 2008 Professor (W3), Genetics, Institute for Biology, Freie Universität Berlin and NeuroCure Cluster of Excellence, Charité - Universitätsmedizin Berlin
- 2006 – 2008 Professor (W2) for Experimental Biomedicine and Bio-Imaging, Rudolf Virchow Center of Excellence, Universität Würzburg
- 2002 – 2005 Spokesman, Nachwuchsgruppen der Max Planck Gesellschaft
- 2001 – 2006 Independent junior research group "Neuroplasticity", Max Planck Society at the European Neuroscience Institute, Göttingen
- 1997 – 2000 Postdoc with Christoph Schuster, Max Planck Institute, Tübingen
- 1993 – 1997 Doctoral thesis (Dr. rer. nat., Advisor: Prof. Dr. Christian F. Lehner), Friedrich Miescher Laboratory of the Max Planck Institute, Tübingen

Research fields

Our group is active in the field of cellular and molecular neurobiology with the following major areas:

- Cellular and molecular mechanisms of synapse formation and plasticity
- Molecular mechanisms of synaptic transmission
- Molecular organization of synapses in physiological and pathophysiological states
- "Synaptopathy" in neurological-psychiatric and neurodevelopmental diseases, particularly autism

Activities in the scientific community, honors, awards

- 2005 Best "habilitation" award, Faculty of Medicine, University of Göttingen
- 2000 Long-Term Research Fellowship, European Molecular Biology Organization (EMBO) and HFSP Long-Term Research Fellowship

Selected publications

Haucke, V, Neher, E and Sigrist, SJ. Protein scaffolds in the coupling of synaptic exocytosis and endocytosis. *Nat Rev Neurosci*. 2011; 12, 127-38.

Owald, D, Fouquet, W, Schmidt, M, Wichmann, C, Mertel, S, Depner, H, Christiansen, F, Zube, C, Quentin, C, Korner, J, Urlaub, H, Mechtler, K and Sigrist, SJ. A Syd-1 homologue regulates pre- and postsynaptic maturation in *Drosophila*. *J Cell Biol*. 2010; 188, 565-79.

Banovic, D, Khorramshahi, O, Oswald, D, Wichmann, C, Riedt, T, Fouquet, W, Tian, R, Sigrist, SJ and Aberle, H. *Drosophila* neuroligin 1 promotes growth and postsynaptic differentiation at glutamatergic neuromuscular junctions. *Neuron*. 2010; 66, 724-38.

Fouquet, W, Oswald, D, Wichmann, C, Mertel, S, Depner, H, Dyba, M, Hallermann, S, Kittel, RJ, Eimer, S and Sigrist, SJ. Maturation of active zone assembly by *Drosophila* Bruchpilot. *J Cell Biol*. 2009; 186, 129-45.

Schmid, A, Hallermann, S, Kittel, RJ, Khorramshahi, O, Frolich, AM, Quentin, C, Rasse, TM, Mertel, S, Heckmann, M and Sigrist, SJ. Activity-dependent site-specific changes of glutamate receptor composition in vivo. *Nat Neurosci*. 2008; 11, 659-66.

Ataman, B, Ashley, J, Gorczyca, M, Ramachandran, P, Fouquet, W, Sigrist, SJ and Budnik, V. Rapid activity-dependent modifications in synaptic structure and function require bidirectional Wnt signaling. *Neuron*. 2008; 57, 705-18.

Wagh, DA, Rasse, TM, Asan, E, Hofbauer, A, Schwenkert, I, Durrbeck, H, Buchner, S, Dabauvalle, MC, Schmidt, M, Qin, G, Wichmann, C, Kittel, R, Sigrist, SJ and Buchner, E. Bruchpilot, a protein with homology to ELKS/CAST, is required for structural integrity and function of synaptic active zones in *Drosophila*. *Neuron*. 2006; 49, 833-44.

Kittel, RJ, Wichmann, C, Rasse, TM, Fouquet, W, Schmidt, M, Schmid, A, Wagh, DA, Pawlu, C, Kellner, RR, Willig, KI, Hell, SW, Buchner, E, Heckmann, M and Sigrist, SJ. Bruchpilot promotes active zone assembly, Ca²⁺ channel clustering, and vesicle release. *Science*. 2006; 312, 1051-4.

Rasse, TM, Fouquet, W, Schmid, A, Kittel, RJ, Mertel, S, Sigrist, SJ, Schmidt, M, Guzman, A, Merino, C, Qin, G, Quentin, C, Madeo, FF, Heckmann, M and Sigrist, SJ. Glutamate receptor dynamics organizing synapse formation in vivo. *Nat Neurosci*. 2005; 8, 898-905.

Sigrist, SJ, Thiel, PR, Reiff, DF, Lachance, PE, Lasko, P and Schuster, CM. Postsynaptic translation affects the efficacy and morphology of neuromuscular junctions. *Nature*. 2000; 405, 1062-5.