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Curriculum vitae

since 2014	Einstein Professor (Award for Researchers with High International Reputation)
since 2012	Spokesperson of the Collaborative Research Center "Membrane Scaffolding"
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

since 2016	Head of Scientific Advisory Board of Leibniz Institute for Neurobiology, Magdeburg, Germany
since 2014	Einstein Professor, Einstein Foundation Berlin
since 2012	Elected Member of the German Research Foundation (DFG) review board "Neurobiology," Germany; re-elected 2016
Since 2012	Elected Member, German Research Foundation (DFG) review board "Emmy Noether Programm" (re-elected in 2016)
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
1997-2000	Habilitation-Fellowship Claußen Foundation: Funding of Postdoc position, Germany

Selected publications

Gupta V.K., Pech, .U., Bhukel, A., Fulterer, A., Ender, A., Mauermann, S.F., Andlauer, T.F.M., Antwi-Adjei, E., Beuschel, C., Thriene, K., Maglione, M., Quentin, C., Bushow R., Schwärzel, M., Mielke, T., Madeo, F., Dengjel, J., Fiala, A., Sigrist, S.J. (2016). Spermidine suppresses age-associated memory impairment by preventing adverse increase of presynaptic active zone size and release. *Plos Biology*, accepted 27.8.2016.

Bohme MA, Beis C, Reddy-Alla S, Reynolds E, Mampell MM, Grasskamp AT, Lutzkendorf J, Bergeron DD, Driller JH, Babikir H, Gottfert F, Robinson IM, O'Kane CJ, Hell SW, Wahl MC, Stelzl U, Loll B, Walter AM, Sigrist SJ. Active zone scaffolds differentially accumulate Unc13 isoforms to tune Ca²⁺ channel-vesicle coupling. *Nat Neurosci*. 2016.

Muhammad K, Reddy-Alla S, Driller JH, Schreiner D, Rey U, Bohme MA, Hollmann C, Ramesh N, Depner H, Lutzkendorf J, Matkovic T, Gotz T, Bergeron DD, Schmoranzler J, Goettfert F, Holt M, Wahl MC, Hell SW, Scheiffele P, Walter AM, Loll B, Sigrist SJ. Presynaptic spinophilin tunes neurexin signalling to control active zone architecture and function. *Nat Commun*. 2015;6:8362.

Matkovic T, Siebert M, Knoche E, Depner H, Mertel S, Oswald D, Schmidt M, Thomas U, Sickmann A, Kamin D, Hell SW, Burger J, Hollmann C, Mielke T, Wichmann C, Sigrist SJ. The Bruchpilot cytomatrix determines the size of the readily releasable pool of synaptic vesicles. *J Cell Biol*. 2013;202(4):667-83.

Gupta VK, Scheunemann L, Eisenberg T, Mertel S, Bhukel A, Koemans TS, Kramer JM, Liu KS, Schroeder S, Stunnenberg HG, Sinner F, Magnes C, Pieber TR, Dipt S, Fiala A, Schenck A, Schwaerzel M, Madeo F, Sigrist SJ. Restoring polyamines protects from age-induced memory impairment in an autophagy-dependent manner. *Nat Neurosci*. 2013;16(10):1453-60.

Owald D, Khorramshahi O, Gupta VK, Banovic D, Depner H, Fouquet W, Wichmann C, Mertel S, Eimer S, Reynolds E, Holt M, Aberle H, Sigrist SJ. Cooperation of Syd-1 with Neurexin synchronizes pre- with postsynaptic assembly. *Nat Neurosci*. 2012;15(9):1219-26.

Liu KS, Siebert M, Mertel S, Knoche E, Wegener S, Wichmann C, Matkovic T, Muhammad K, Depner H, Mettke C, Buckers J, Hell SW, Muller M, Davis GW, Schmitz D, Sigrist SJ. RIM-binding protein, a central part of the active zone, is essential for neurotransmitter release. *Science (New York, NY)*. 2011;334(6062):1565-9.

Owald D, Fouquet W, Schmidt M, Wichmann C, Mertel S, Depner H, Christiansen F, Zube C, Quentin C, Korner J, Urlaub H, Mechtler K, Sigrist SJ. A Syd-1 homologue regulates pre- and postsynaptic maturation in *Drosophila*. *J Cell Biol*. 2010;188(4):565-79.

Schmid A, Hallermann S, Kittel RJ, Khorramshahi O, Frolich AM, Quentin C, Rasse TM, Mertel S, Heckmann M, Sigrist SJ. Activity-dependent site-specific changes of glutamate receptor composition in vivo. *Nat Neurosci*. 2008;11(6):659-66.

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, Sigrist SJ. Bruchpilot promotes active zone assembly, Ca²⁺ channel clustering, and vesicle release. *Science (New York, NY)*. 2006;312(5776):1051-4.