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Curriculum vitae

Since 2015	Scientific coordinator, NeuroCure – Cluster of Excellence, Berlin
Since 2014	Coordinator and Director, Einstein Center for Neurosciences, Berlin
Since 2011	Principal investigator and site speaker, German Center for Neurodegenerative Diseases (DZNE), Berlin
2008 – 2015	Spokesperson, Research Training Group (GRK) 1123 'Cellular Mechanisms of Learning and Memory Consolidation in the Hippocampal Formation', German Research Foundation (DFG)
Since 2006	Coordinator, NeuroCure – Cluster of Excellence grant applications
Since 2005	Director, Neuroscience Research Center (NWFZ), Charité, Berlin
Since 2005	Full professor (W3), Cellular and Molecular Neurosciences, Charité, Berlin
2002 – 2005	Assistant professor, Department of Neurophysiology, Charité, Berlin
1999 – 2002	Postdoctoral fellow, University of California, San Francisco, US
1997 – 1998	Studies in Physics, Humboldt-Universität zu Berlin
1994 – 1997	Studies in Medicine, Charité, Berlin
1992 – 1997	PhD thesis, Department of Neurophysiology, Universität zu Köln and Charité, Berlin
1990 – 1994	Studies in Medicine, Universität zu Köln

Research fields

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

- Cellular and molecular mechanisms of synaptic plasticity
- Modulation and development of synaptic transmission, plasticity, and neuronal networks
- Homeostatic plasticity, hyperexcitability, and epilepsy
- 'Synaptopathy' in neurological-psychiatric disorders such as epilepsy, Alzheimer's disease, mental retardation, and autism
- Functional genomics

Activities in the scientific community, honors, awards

2019	ERC Synergy Grant BrainPlay, European Research Council
Since 2018	Member, Leopoldina – German National Academy of Sciences
Since 2017	Member, Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)
Since 2011	1st Einstein Professor, Einstein Foundation Berlin
Since 2010	Elected member, Faculty Board, Charité, Berlin
2005	Bernard Katz Award, Bert Sakmann and Alexander von Humboldt Foundation
2005	Schilling Award, German Neuroscience Society (NWG)
2004	Appointed to the Otto Loewi Center for Cellular and Molecular Neurobiology, Jerusalem, IL
2004 – 2009	Member, Die Junge Akademie of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW) and Leopoldina – German National Academy of Sciences
Since 2003	Teaching Awards (2003/04, 2005/06, 2008/09, 2012/13), Graduate Program Medical Neurosciences, Charité, Berlin
2002	Emmy Noether Independent Junior Research Grant, German Research Foundation (DFG)
1998	Humboldt Award for Best Thesis, Humboldt-Universität zu Berlin

Selected publications

Kornau HC, Kreye J, Stumpf A, Fukata Y, Parthier D, Sammons RP, Imbrosci B, Kurpjuweit S, Kowski AB, Fukata M, Pruss H, Schmitz D. Human Cerebrospinal Fluid Monoclonal LGI1 Autoantibodies Increase Neuronal Excitability. Ann Neurol 2020; 87: 405-418

Bernal Sierra YA, Rost BR, Pofahl M, Fernandes AM, Kopton RA, Moser S, Holtkamp D, Masala N, Beed P, Tukker JJ, Oldani S, Bonigk W, Kohl P, Baier H, Schneider-Warme F, Hegemann P, Beck H, Seifert R, Schmitz D. Potassium channel-based optogenetic silencing. Nat Commun. 2018. 9, 4611.

Stempel AV, Stumpf A, Zhang HY, Ozdogan T, Pannasch U, Theis AK, Otte DM, Wojtalla A, Racz I, Ponomarenko A, Xi ZX, Zimmer A, Schmitz D. Cannabinoid Type 2 Receptors Mediate a Cell Type-Specific Plasticity in the Hippocampus. Neuron 2016; 90:795-809

Beed P, Gundlfinger A, Schneiderbauer S, Song J, Bohm C, Burgalossi A, Brecht M, Vida I, Schmitz D. Inhibitory gradient along the dorsoventral axis in the medial entorhinal cortex. Neuron 2013; 79:1197-1207

Dugladze T, Schmitz D, Whittington MA, Vida I, Gloveli T. Segregation of axonal and somatic activity during fast network oscillations. Science 2012; 336:1458-1461

Maier N, Tejero-Cantero A, Dorrn AL, Winterer J, Beed PS, Morris G, Kempter R, Poulet JF, Leibold C, Schmitz D. Coherent phasic excitation during hippocampal ripples. Neuron 2011; 72:137-152

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 2011; 334:1565-1569 | *corresponding authors

Beed P, Bendels MH, Wiegand HF, Leibold C, Johenning FW, Schmitz D. Analysis of excitatory microcircuitry in the medial entorhinal cortex reveals cell-type-specific differences. Neuron 2010; 68:1059-1066

Trimbuch T, Beed P, Vogt J, Schuchmann S, Maier N, Kintscher M, Breustedt J, Schuelke M, Streu N, Kieselmann O, Brunk I, Laube G, Strauss U, Battefeld A, Wende H, Birchmeier C, Wiese S, Sendtner M, Kawabe H, Kishimoto-Suga M, Brose N, Baumgart J, Geist B, Aoki J, Savaskan NE, Brauer AU, Chun J, Ninnemann O, Schmitz D*, Nitsch R*. Synaptic PRG-1 modulates excitatory transmission via lipid phosphate-mediated signaling. Cell 2009; 138:1222-1235 | *corresponding authors

Mellor J, Nicoll RA, Schmitz D. Mediation of hippocampal mossy fiber long-term potentiation by presynaptic Ih channels. Science 2002; 295:143-147