

Dietmar Schmitz

Charité – Universitätsmedizin Berlin
Neuroscience Research Center (NWFZ)
Charitéplatz 1
D-10117 Berlin

Phone: +49 (0)30 450539054
Email: dietmar.schmitz(at)charite.de



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 – 1999 Postdoctoral researcher, Department of Neurophysiology, Charité – Universitätsmedizin Berlin
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

- Nitzan, N., S. McKenzie, P. Beed, D. F. English, S. Oldani, J. J. Tukker, G. Buzsaki, and D. Schmitz. 2020. 'Propagation of hippocampal ripples to the neocortex by way of a subiculum-retrosplenial pathway', *Nat Commun*, 11: 1947.
- Bernal Sierra, Y. A., B. R. Rost, M. Pofahl, A. M. Fernandes, R. A. Kopton, S. Moser, D. Holtkamp, N. Masala, P. Beed, J. J. Tukker, S. Oldani, W. Bonigk, P. Kohl, H. Baier, F. Schneider-Warme, P. Hegemann, H. Beck, R. Seifert, and D. Schmitz. 2018. 'Potassium channel-based optogenetic silencing', *Nat Commun*, 9: 4611.
- Stempel, A. V., A. Stumpf, H. Y. Zhang, T. Ozdogan, U. Pannasch, A. K. Theis, D. M. Otte, A. Wojtalla, I. Racz, A. Ponomarenko, Z. X. Xi, A. Zimmer, and D. Schmitz. 2016. 'Cannabinoid Type 2 Receptors Mediate a Cell Type-Specific Plasticity in the Hippocampus', *Neuron*, 90: 795-809.
- Beed, P., A. Gundlfinger, S. Schneiderbauer, J. Song, C. Bohm, A. Burgalossi, M. Brecht, I. Vida, and D. Schmitz. 2013. 'Inhibitory gradient along the dorsoventral axis in the medial entorhinal cortex', *Neuron*, 79: 1197-207.
- Dugladze, T., D. Schmitz, M. A. Whittington, I. Vida, and T. Gloveli. 2012. 'Segregation of axonal and somatic activity during fast network oscillations', *Science*, 336: 1458-61.
- Liu, K. S., M. Siebert, S. Mertel, E. Knoche, S. Wegener, C. Wichmann, T. Matkovic, K. Muhammad, H. Depner, C. Mettke, J. Buckers, S. W. Hell, M. Muller, G. W. Davis, D. Schmitz, and S. J. Sigrist. 2011. 'RIM-binding protein, a central part of the active zone, is essential for neurotransmitter release', *Science*, 334: 1565-9.
- Maier, N., A. Tejero-Cantero, A. L. Dorn, J. Winterer, P. S. Beed, G. Morris, R. Kempter, J. F. Poulet, C. Leibold, and D. Schmitz. 2011. 'Coherent phasic excitation during hippocampal ripples', *Neuron*, 72: 137-52.
- Beed, P., M. H. Bendels, H. F. Wiegand, C. Leibold, F. W. Jochenning, and D. Schmitz. 2010. 'Analysis of excitatory microcircuitry in the medial entorhinal cortex reveals cell-type-specific differences', *Neuron*, 68: 1059-66.
- Trimbuch, T., P. Beed, J. Vogt, S. Schuchmann, N. Maier, M. Kintscher, J. Breustedt, M. Schuelke, N. Streu, O. Kieselmann, I. Brunk, G. Laube, U. Strauss, A. Battefeld, H. Wende, C. Birchmeier, S. Wiese, M. Sendtner, H. Kawabe, M. Kishimoto-Suga, N. Brose, J. Baumgart, B. Geist, J. Aoki, N. E. Savaskan, A. U. Brauer, J. Chun, O. Ninnemann, D. Schmitz, and R. Nitsch. 2009. 'Synaptic PRG-1 modulates excitatory transmission via lipid phosphate-mediated signaling', *Cell*, 138: 1222-35.
- Mellor, J., R. A. Nicoll, and D. Schmitz. 2002. 'Mediation of hippocampal mossy fiber long-term potentiation by presynaptic Ih channels', *Science*, 295: 143-7.