

Dietmar Schmitz

Charité - Universitätsmedizin Berlin
Neuroscience Research Center (NWFZ)
Charitéplatz 1 | D-10117 Berlin
Phone: +49 (0)30 450-539054
E-mail: dietmar.schmitz@charite.de



Curriculum vitae

since 2008 Coordinator, Graduate School “Learning and Memory” (together with U. Heinemann)
since 2007 Coordinator, NeuroCure Cluster of Excellence
since 2005 Chair, Neuroscience Research Center, Charité
since 2005 Professor (W3), Cellular and Molecular Neurosciences, Charité
2002 – 2005 Assistant Professor, Neurophysiology, Charité
1999 – 2002 Postdoctoral fellow (Advisor: Prof. R. Nicoll), University of California, San Francisco
1997 – 1999 Postdoctoral fellow (Advisor: Prof. U. Heinemann), Department of Neurophysiology, Charité
1992 – 1997 PhD thesis, Department of Neurophysiology, University of Cologne and Charité
1994 – 1997 Studies in Medicine, Charité-Universitätsmedizin Berlin
1990 – 1994 Studies in Medicine, University of Cologne

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

Activities in the scientific community, honors, awards

since 2011 Einstein Professor, Einstein Foundation Berlin
2008/09 Teaching Award, Graduate Program Medical Neuroscience, Charité
2005/06 Bernard Katz Award, Bert Sakmann and Alexander von Humboldt Foundation
2005 Schilling Award, German Neuroscience Society
2004/05 Teaching Award, Graduate Program Medical Neuroscience, Charité
2004 Appointed to the Otto Loewi Center for Cellular and Molecular Neurobiology, Israel
2004 Appointed to the Young Academy (Junge Akademie), the Berlin-Brandenburg Academy of Sciences and Humanities (Berlin-Brandenburgische Akademie der Wissenschaften - BBAW) and the German Academy of Natural Scientists (Leopoldina)
2003/04 Teaching Award, Graduate Program Medical Neuroscience, Charité
2002 Junior research group, Emmy Noether Program
1998 Humboldt Award for Best Thesis, Humboldt-Universität zu Berlin

Selected publications

Maier, N*, Tejero-Cantero, A*, Dornn, AL, Winterer, J, Beeds, PS, Morris, G, Kempster, R, Poulet, JFA*, Leibold, C*, Schmitz, D*. Coherent phasic excitation during hippocampal ripples. *Neuron*. 2011; (in press). | *equal contribution

Heisler, FF, Loebrich, S, Pechmann, Y, Maier, N, Zivkovic, AR, Tokito, M, Hausrat, TJ, Schweizer, M, Bähring, R, Holzbaur, EL, Schmitz, D and Kneussel, M. Muskelein Regulates Actin Filament- and Microtubule-Based GABA(A) Receptor Transport in Neurons. *Neuron*. 2011; 70, 66-81.

Beed, P*, Bendels, MH*, Wiegand, HF, Leibold, C, Johenning, FW* and Schmitz, D*. Analysis of excitatory microcircuitry in the medial entorhinal cortex reveals cell-type-specific differences. *Neuron*. 2010; 68, 1059-66. | *equal contribution

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* and Nitsch, R*. Synaptic PRG-1 modulates excitatory transmission via lipid phosphate-mediated signaling. *Cell*. 2009; 138, 1222-35. | *equal contribution

Leibold, C, Gundlfinger, A, Schmidt, R, Thurley, K, Schmitz, D* and Kempster, R*. Temporal compression mediated by short-term synaptic plasticity. *Proc Natl Acad Sci U S A*. 2008; 105, 4417-22. | *equal contribution

Schuchmann, S*, Schmitz, D*, Rivera, C, Vanhatalo, S, Salmen, B, Mackie, K, Sipila, ST, Voipio, J and Kaila, K. Experimental febrile seizures are precipitated by a hyperthermia-induced respiratory alkalosis. *Nat Med*. 2006; 12, 817-23. | *equal contribution

Nicoll, RA and Schmitz, D. Synaptic plasticity at hippocampal mossy fibre synapses. *Nat Rev Neurosci*. 2005; 6, 863-76.

Schmitz, D, Mellor, J, Breustedt, J and Nicoll, RA. Presynaptic kainate receptors impart an associative property to hippocampal mossy fiber long-term potentiation. *Nat Neurosci*. 2003; 6, 1058-63.

Mellor, J, Nicoll, RA and Schmitz, D. Mediation of hippocampal mossy fiber long-term potentiation by presynaptic Ih channels. *Science*. 2002; 295, 143-7.

Schmitz, D, Schuchmann, S, Fisahn, A, Draguhn, A, Buhl, EH, Petrasch-Parwez, E, Dermietzel, R, Heinemann, U and Traub, RD. Axi-axonal coupling. a novel mechanism for ultrafast neuronal communication. *Neuron*. 2001; 31, 831-40.