

## Christian Rosenmund

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### Curriculum vitae

- since 2009 Member, Board of Directors, NeuroCure Cluster of Excellence
- since 2009 Speaker Collaborative Research Center (SFB) 665, "Developmental Disturbances in the Nervous System"
- since 2009 Professor (W3), Neurobiology, NeuroCure Cluster of Excellence, Charité
- 2008 – 2010 Professor, Department of Molecular and Human Genetics and Department of Neuroscience (joint primary appointment), Baylor College of Medicine, Houston
- 2005 – 2008 Director, Mouse Synaptic Plasticity Core, Mental Retardation Research Center, Baylor College of Medicine, Houston
- 2003 – 2008 Associate Professor, Department of Molecular and Human Genetics and Department of Neuroscience (joint primary appointment), Baylor College of Medicine, Houston
- 1999 – 2003 Lecturer in Physiology, University of Göttingen, Germany
- 1998 – 2003 Principal investigator and Heisenberg fellow, Department of Membrane Biophysics, Max Planck Institute for Biophysical Chemistry, Göttingen
- 1995 – 1997 Helmholtz fellow, Workgroup Cellular Neurobiology (Dr. Marty), Max Planck Institute for Biophysical Chemistry, Göttingen
- 1993 – 1995 Howard Hughes fellow (Advisor: Dr. Charles Stevens), Molecular Neurobiology Laboratories, The Salk Institute, La Jolla, California
- 1989 – 1993 PhD in Physiology (Advisor: Prof. G. Westbrook), Vollum Institute, Oregon Health Sciences University, Portland, Oregon
- 1984 – 1989 Studies in Pharmacy, University of Frankfurt, 3rd Staatsexamen in Pharmacy

### Research fields

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

- Molecular physiology of the synapse
- Modulation and development of synaptic transmission, plasticity, and neuronal networks
- "Synaptopathy" in neurological-psychiatric disorders such as epilepsy, Alzheimer's disease, mental retardation, and autism

### Activities in the scientific community, honors, awards

- 2010 – 2015 Advanced Grant, European Research Council (ERC)
- 2007 – 2010 Human Frontier Science Program award RGP35/2007
- 2007 – 2009 Research grant, International Rett Syndrome Foundation
- 2005 – 2010 Core facility grant, NIH HD024064 Synaptic Physiology
- 2005 – 2010 Two principal investigator NIH R01 Research grants (NS050655; NS051262)
- 2005 – 2009 Member, NIH SYN study section, CSR, NIH
- 2005 – 2010 Member, Faculty of 1000
- 1999 – 2003 Heisenberg Stipend
- 1995 – 1997 Helmholtz Stipend
- 1993 – 1995 Howard Hughes Research Fellowship

## Selected publications

Weston, MC, Nehring, RB, Wojcik, SM and Rosenmund, C. Interplay between VGLUT Isoforms and Endophilin A1 Regulates Neurotransmitter Release and Short-Term Plasticity. *Neuron*. 2011; 69, 1147-59.

Xue, M, Craig, TK, Xu, J, Chao, HT, Rizo, J and Rosenmund, C. Binding of the complexin N terminus to the SNARE complex potentiates synaptic-vesicle fusogenicity. *Nat Struct Mol Biol*. 2010; 17, 568-75.

Chao, HT, Chen, H, Samaco, RC, Xue, M, Chahrour, M, Yoo, J, Neul, JL, Gong, S, Lu, HC, Heintz, N, Ekker, M, Rubenstein, JL, Noebels, JL, Rosenmund, C and Zoghbi, HY. Dysfunction in GABA signalling mediates autism-like stereotypies and Rett syndrome phenotypes. *Nature*. 2010; 468, 263-9.

Xue, M, Lin, YQ, Pan, H, Reim, K, Deng, H, Bellen, HJ and Rosenmund, C. Tilting the balance between facilitatory and inhibitory functions of mammalian and Drosophila Complexins orchestrates synaptic vesicle exocytosis. *Neuron*. 2009; 64, 367-80.

Xue, M, Ma, C, Craig, TK, Rosenmund, C and Rizo, J. The Janus-faced nature of the C(2)B domain is fundamental for synaptotagmin-1 function. *Nat Struct Mol Biol*. 2008; 15, 1160-8.

Gerber, SH, Rah, JC, Min, SW, Liu, X, de Wit, H, Dulubova, I, Meyer, AC, Rizo, J, Arancillo, M, Hammer, RE, Verhage, M, Rosenmund, C and Sudhof, TC. Conformational switch of syntaxin-1 controls synaptic vesicle fusion. *Science*. 2008; 321, 1507-10.

Xue, M, Reim, K, Chen, X, Chao, HT, Deng, H, Rizo, J, Brose, N and Rosenmund, C. Distinct domains of complexin I differentially regulate neurotransmitter release. *Nat Struct Mol Biol*. 2007; 14, 949-58.

Chao, HT, Zoghbi, HY and Rosenmund, C. MeCP2 controls excitatory synaptic strength by regulating glutamatergic synapse number. *Neuron*. 2007; 56, 58-65.

Basu, J, Betz, A, Brose, N and Rosenmund, C. Munc13-1 C1 domain activation lowers the energy barrier for synaptic vesicle fusion. *J Neurosci*. 2007; 27, 1200-10.

Wojcik, SM, Rhee, JS, Herzog, E, Sigler, A, Jahn, R, Takamori, S, Brose, N and Rosenmund, C. An essential role for vesicular glutamate transporter 1 (VGLUT1) in postnatal development and control of quantal size. *Proc Natl Acad Sci U S A*. 2004; 101, 7158-63.