

Rosemarie Grantyn

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Curriculum vitae

- since 2010 Senior Professor, NeuroCure Cluster of Excellence
- since 2006 Professor Emeritus and visiting scientist, Institute of Neurophysiology, Charité
- since 1995 Professor (C3) and Head of Department, Developmental Physiology, Institute of Neurophysiology, Charité
- since 2000 Head, BMBF-funded research group, Max Planck Institute for Psychiatry, in Munich-Martinsried
- since 1985 Researcher, Max Planck Institute for Psychiatry, and later "Privatdozent", Technical University, Munich
- 1980 Dr. sc. med., University of Leipzig
- 1969 – 1984 Assistant Professor, Carl Ludwig Institute for Physiology, University of Leipzig, and, since 1982, Head of the "Physiology of the Nerve Cell" Lab
- 1966 – 1969 PhD thesis (Dir. H. Drischel), Carl Ludwig Institute for Physiology, University of Leipzig
- 1960 – 1966 Studies in Medicine, Leningrad Medical University, I.P. Pavlov

Research fields

At present our lab is active in the field of neurodegenerative diseases and their cellular and molecular basis focusing on the following topics:

- Role of astrocytes in the regulation of transmitter release
- Functional maturation and plasticity of GABAergic synaptic transmission
- Glutamate-GABA balance in health and disease
- Cellular basis of Huntington's disease
- Electrical stimulation effects in Parkinson's disease (DBS)

Activities in the scientific community, honors, awards

- 2009/2011 CHDI Foundation Research Grant (jointly with Donald S. Faber, Albert Einstein College, NY)
- 2011 ZEN-Award of Hertie Foundation
- 2009 Initiation of Hertie-funded NWG project "German Neuroscientists" (with H. Kettenmann)
- 2007 Teaching Award, Graduate Program Medical Neuroscience, Charité
- 2000/01 Visiting Fellow Award, John Curtin School of Experimental Medicine, Canberra, Australia, for studies in the John C. Eccles Lab
- 1966 – 1999 Initiation and "Sprecher", DFG-Schwerpunkt "Transgenic animal models in Neurosciences" (with A. Konnerth and C.M. Becker)
- 1992 Editor, "Practical Electrophysiological Methods: A Guide for In Vitro Studies in Vertebrate Neurobiology"
- 1980 Visiting Professor, Department of Physiology & Neuroscience (Dir. R. Llinás), New York University Medical Center
- 1978 – 1980 Council Member, Physiological Society, German Democratic Republic

Selected publications

Grantyn R, Henneberger C, Jüttner R, Meier J, and Grantyn R. Functional hallmarks of GABAergic synapse maturation and the diverse roles of neurotrophins. *Frontiers Cell Neurosci.* 2011; 5:13.

Holtje, M, Djalali, S, Hofmann, F, Munster-Wandowski, A, Hendrix, S, Boato, F, Dreger, SC, Grosse, G, Henneberger, C, Grantyn, R, Just, I and Ahnert-Hilger, G. A 29-amino acid fragment of Clostridium botulinum C3 protein enhances neuronal outgrowth, connectivity, and reinnervation. *FASEB J.* 2009; 23, 1115-26.

Kirmse, K, Dvorzhak, A, Kirischuk, S and Grantyn, R. GABA transporter 1 tunes GABAergic synaptic transmission at output neurons of the mouse neostriatum. *J Physiol.* 2008; 586, 5665-78.

Eichler, SA, Kirischuk, S, Juttner, R, Schafermeier, PK, Legendre, P, Lehmann, TN, Gloveli, T, Grantyn, R and Meier, JC. Glycinergic tonic inhibition of hippocampal neurons with depolarizing GABAergic transmission elicits histopathological signs of temporal lobe epilepsy. *J Cell Mol Med.* 2008; 12, 2848-66.

Henneberger, C, Redman, SJ and Grantyn, R. Cortical efferent control of subcortical sensory neurons by synaptic disinhibition. *Cereb Cortex.* 2007; 17, 2039-49.

Singh, B, Henneberger, C, Betances, D, Arevalo, MA, Rodriguez-Tebar, A, Meier, JC and Grantyn, R. Altered balance of glutamatergic/GABAergic synaptic input and associated changes in dendrite morphology after BDNF expression in BDNF-deficient hippocampal neurons. *J Neurosci.* 2006; 26, 7189-200.

Salama-Cohen, P, Arevalo, MA, Meier, J, Grantyn, R and Rodriguez-Tebar, A. NGF controls dendrite development in hippocampal neurons by binding to p75NTR and modulating the cellular targets of Notch. *Mol Biol Cell.* 2005; 16, 339-47.

Meier, JC, Henneberger, C, Melnick, I, Racca, C, Harvey, RJ, Heinemann, U, Schmieden, V and Grantyn, R. RNA editing produces glycine receptor alpha3(P185L), resulting in high agonist potency. *Nat Neurosci.* 2005; 8, 736-44.

Kirischuk, S, Juttner, R and Grantyn, R. Time-matched pre- and postsynaptic changes of GABAergic synaptic transmission in the developing mouse superior colliculus. *J Physiol.* 2005; 563, 795-807.

Juttner, R, More, MI, Das, D, Babich, A, Meier, J, Henning, M, Erdmann, B, Müller, EC, Otto, A, Grantyn, R and Rathjen, FG. Impaired synapse function during postnatal development in the absence of CALEB, an EGF-like protein processed by neuronal activity. *Neuron.* 2005; 46, 233-45.