

Curriculum Vitae

Michael Frotscher



Institute for Structural Neurobiology
Center for Molecular Neurobiology (ZMNH)
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Education and Professional Experience

Since May 2011 - Hertie Professor for Neuroscience, Center for Molecular Neurobiology Hamburg (ZMNH), Institute for Structural Neurobiology (ISN)
1989-2011 - Professor of Neuroanatomy, Inst. of Anatomy & Cell Biol., Univ. of Freiburg
1983-1989 - Associate Professor (C3), Inst. of Anatomy, Univ. of Frankfurt/Main
1985 - Visiting Professor, Dept. of Obstetrics & Gynecol., Yale Univ, New Haven
1982 - Assistant Professor (C2) Inst. of Anatomy & Cell Biol., Univ. of Heidelberg
1981 - Habilitation, Univ. of Frankfurt (advisors: Prof. R. Hassler, Prof. H. Braak)
1979-1981 - Research Fellowship, Max Planck Inst. for Brain Research, Frankfurt/Main
1974-1979 - Scientific Assistant, Inst. of Anatomy, Humboldt University, Berlin
1974 - Postdoc, 1st Dept. of Anatomy, Semmelweis Univ., Budapest, Hungary
1974 - Dr. med., Humboldt University, Berlin (advisor: Prof. W. Kirsche)
1966-1973 - Study of medicine, Humboldt University, Berlin

Research Fields

Development and plasticity of hippocampal connections, neuronal migration, structure and function of central synapses.

Activities in the scientific community, honors, awards

2013 - Jacob Henle Medal of the University of Göttingen
2011 - Fellow of the American Association for the Advancement of Science
2009 - Dr. honoris causa, Univ. of Frankfurt/Main
2009 - DFG Senate for SFBs
2007 - Hertie Senior Professor for Neuroscience

2007 - Senator, Section of Neuroscience, German Academy of Sciences Leopoldina
2006 - Dean for Research, Medical Faculty, Univ. of Freiburg
2004 - Vice Chairman, Neuroscience Panel, DFG
2002 - Ernst Jung Award for Medical Research
2001 - Research Prize of Baden-Württemberg
2000 - Max Planck Award for International Cooperation
1999 - President of the German Anatomical Society
1998 - Feldberg Award (Feldberg Foundation for Anglo-German Scientific Exchange)
1995 - Member of the German Academy of Sciences Leopoldina
1995 - Coordinator SFB 505
1993 - President of the German Neuroscience Society (NWG)
1993 - Leibniz Award of the Deutsche Forschungsgemeinschaft (DFG)
1992 - Wolfgang Bargmann Prize
1992 - Coordinator SFB 325

Editorial Boards (present and past):

J Neurosci, J Comp Neurol, Neuroscience, Eur J Neurosci, Exp Neurol, Hippocampus, Exp Brain Res, Restor Neurol Neurosci, Cell Tissue Res, Anat Embryol, Cells Tissues Organs, Neuroforum, Adv Anat Embryol Cell Biol, Brain Structure and Function, Frontiers Neurosci

The most important publications:

1. Guzman SJ, Schlögl A, **Frotscher M**, Jonas P Science. Synaptic mechanisms of pattern completion in the hippocampal CA3 network (2016) Science 353(6304):1117-23. doi: 10.1126/science.aaf1836.
2. Studer D, Zhao S, Chai X, Jonas P, Graber W, Nestel S, **Frotscher M** (2014) Capture of activity-induced ultrastructural changes at synapses by high-pressure freezing of brain tissue. Nature Protoc 9:1480-1495.
3. Hellwig S, Hack I, Kowalski J, Brunne B, Jarowij J, Unger A, Bock HH, Junghans D, **Frotscher M** (2011) Role for Reelin in neurotransmitter release. J Neurosci 31:2352-2360.
4. **Frotscher M** (2010) Role for Reelin in stabilizing cortical architecture. Trends Neurosci 33:407-414.
5. Chai X, Förster E, Zhao S, Bock HH, **Frotscher M** (2009) Reelin stabilizes the actin cytoskeleton of neuronal processes by inducing n-cofilin phosphorylation at serine3. J Neurosci 29:288-299.
6. Förster E, Zhao S, **Frotscher M** (2006) Laminating the hippocampus. Nature Rev

Neurosci 7:259-267.

7. Förster E, Tielsch A, Saum B, Weiss KH, Johanssen C, Graus-Porta D, Müller U, **Frotscher M** (2002) Reelin, Disabled 1, and beta1 integrins are required for the formation of the radial glial scaffold in the hippocampus. *Proc Natl Acad Sci (USA)* 99:13178-13183.
8. Vida I, **Frotscher M** (2000) A hippocampal interneuron associated with the mossy fiber system. *Proc Natl Acad Sci USA* 97:1275-1280.
9. Markram H, Lübke J, **Frotscher M**, Sakmann B (1997) Regulation of synaptic efficacy by coincidence of postsynaptic APs and EPSPs. *Science* 275:213-215.
10. DelRío JA, Heimrich B, Borrell V, Förster E, Drakew A, Alcántara S, Nakajima K, Miyata T, Ogawa M, Mikoshiba K, Derer P, **Frotscher*** M, Soriano E* (1997) A role for Cajal-Retzius cells and reelin in the development of hippocampal connections. *Nature* 385:70-74. *equal contribution.
11. **Frotscher M**, Heimrich B (1993) Formation of layer-specific fiber projections to the hippocampus in vitro. *Proc Natl Acad Sci USA* 90:10400-10403.