Curriculum vitae - Benedikt Grothe

Prof. Dr. Benedikt Grothe, Chair of Neurobiology
Program Director, Graduate School of Systemic Neurosciences
Ludwig-Maximilians-Universität München (LMU)
Department Biology II
Großhaderner Str. 2
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and

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D – 82152 Planegg-Martinsried
Germany

Member of the Bavarian Academy of Science (since 2007)
Member of the German National Academy of Sciences, Leopoldina (since 2016)

Date of Birth April 08, 1960

Scientific Career	
2014 – present	Fellow of the Max Planck Society
2010 – present	Coordinator/Spokesman, DFG Collaborative Research Center 870 "*Assembly and Function of Neuronal Circuits"*
2009 – 2011	Dean, Faculty of Biology
2006 – present	Director, Graduate School of Systemic Neurosciences (GSN^{LMU})
2005 – present	Founder and Spokesman, Munich Center for Neurosciences (MCN^{LMU})
2004 – 2007	Acting Director (Chair), Department Biology II, LMU
2003 – present	Professor of Neurobiology, Department Biology II, LMU
1999 – 2003	Research Group Leader, Max Planck Institute of Neurobiology, Martinsried
1994 – 1998	Assistent/Oberassistent (equivalent to Ass. Prof.), Zoologisches Institut, LMU
1992 – 1993	Postdoc, New York University, Center for Neural Sciences (Dan. H. Sanes)
1991	Postdoc, University of Texas at Austin (George D. Pollak)
1990-1991	Curator (tenured), Natural History Museum Munich

Academic Education	
1996	Habilitation (Zoology), Privatdozent (indep. lecturer) for Zoology, LMU Munich
1988 – 1991	PhD Dissertation (Dr.rer.nat., Faculty of Biology, LMU) Munich
1983 –1988	Dipl. Biol., LMU, Munich

Academic Job Offers and Short Lists	
1998	Assist. Prof (Tenure-Track), University of Washington, Department of Biological Structure, Seattle, USA
2000	Secundo loco, Professor (Chair), Animal Physiology, University of Regensburg
2002	Full Professor, Lund University, Biology, Sweden Germany PhD Dissertation
2002	Reader, University College London, Department of Cell and Developmental Biology, UK
2002	Secundo loco, Professor (Chair), Université de Fribourg, Medical Center, Switzerland

2003	Professor (Chair), Johan Wolfgang Goethe-Universität Frankfurt a.M., Physiolgie der Medizin, Germany
2007	Director, Parmenides Foundation. Pullach, Germany
2011	Co-Director and Head of Department, Leibniz-Institute for Age Research, Jena, Germany
2015	Full Professor, University of Queensland, Medical Center & Queensland Brain Institute, Australia

Major Research Interests

>100 publications in the area of systemic and auditory neuroscience.

Structure and function of neuronal circuits processing spatio-temporal information, their evolution and development.

Methods in the lab include: comparative electrophysiology *in vitro* and *in vivo*, pharmacology, laser-uncaging, optogenetics, comparative anatomy and immunohistochemistry, animal and human psychophysics

Selected publications

Ford, MC, Alexandrova O, Cossell L, Stange-Marten A, Sinclair J, Kopp-Scheinpflug C, Pecka M, Attwell D, **Grothe B** (2015) Tuning of Ranvier node and internode properties in myelinated axons to adjust action potential timing. *Nature Communic* DOI: 10.1038/ncomms9073

Myoga MH, Lehnert S, Leibold C, Felmy F, **Grothe B** (2014) Precise Timing of Glycinergic Inhibition Controls Coincidence Detection in the Auditory Brainstem. *Nature Communic,* DOI: 10.1038/ncomms4790

Stange A, Myoga MH, Lingner A, Ford MC, Alexandrowa O, Felmy F, Pecka M, Siveke I, **Grothe B** (2013) Adaptation in sound localization: from GABAB receptor-mediated synaptic modulation to perception. *Nature Neurosci* 16:1840-1847

Lesica NA, Lingner A, **Grothe B** (2010) Population coding of interaural time differences in gerbils and barn owls. *J Neurosci* 30:11696-11702

Grothe B, Pecka M, McAlpine D (2010) Mechanisms of sound localization in mammals. *Physiol Rev* 90:983-1012

Magnusson AK, Park TJ, Pecka M, **Grothe B**, Koch U (2008) Retrograde GABA signaling adjusts sound localization by balancing excitation and inhibition in the brainstem. *Neuron* 59:125–137 (equal contributions BG&UK)

Grothe B (2003) New roles for synaptic inhibition in sound localization. *Nature Rev Neurosci* 4: 540-550

Brand A, Behrend O, Marquardt T, McAlpine D, **Grothe B** (2002) Precise inhibition is essential for microsecond interaural time difference coding. *Nature* 417: 543-547

Kapfer C, Seidl AH, Schweizer H, **Grothe B** (2002) Experience-dependent refinement of inhibitory inputs to auditory coincidence-detector neurons. *Nature Neurosci* 5: 247-253

Grothe B, Sanes DH (1994) Synaptic inhibition influences the temporal coding properties of medial superior olivary neurons: an *in vitro* study. *J Neurosci* 14(3):1701-1709

Grothe B, Vater M, Casseday JH, Covey E (1992) Monaural interaction of excitation and inhibition in the medial superior olive of the mustached bat: an adaptation for biosonar. *Proc Nat Acad Sci USA* 89: 5108-5112

Honours and other pieces of evidence of qualification

- 1990 Junior research award of the German Zoological Society (DZG)
- 1992 DFG-Research-Fellowship
- 2000 Research Award of the German Audiological Society (DGA)
- 2003 – 2008 Editor Journal of Comparative Physiology A
- 2005 – present Board Member, Munich Competence Center for Ethics
- 2007 Heller Lecture (Guest of honour and keynote speaker) Center for Brain Sciences, Hebrew University, Jerusalem)
- 2007 – elected member of the Bavarian Academy of Science
- 2007 – 2010 Editor, PLoSONE
- 2011- 2015 Board of Trustees, Körber-Stiftung (Foundation), Hamburg, Germany
- 2007 – 2014 Director Member Parmenides Foundation, Munich, Germany
- 2007 – 2009 LMU strategic council
- 2008 – 2011 Scientific Advisory Board (Chair), Max Planck Institute of Neurological Research, Cologne,
- 2009 – 2014 Board of Trustees, Max Planck Institutes of Neurobiology & of Biochemistry, Martinsried

- 2009 – Editorial Board, *Hearing Research*
- 2010 – Order of Merit of the Federal Republic of Germany
- 2013 – Advisory board „Zukunft der Lehre“, Goethe University Frankfurt a.M., Germany;
- 2014 – Max Plack Fellow
- 2015 – Editorial Board Member, *Neuroforum*
- 2016 – elected Member of the National Academy of Sciences, Leopoldina

Most important research and teaching collaborations

- 2004 – present BMBF- Bernstein Center for Computational Neurosciences Munich, *BCCN* (PI; vice-coordinator 2004 –present)
- 2006 – present Founder and Speaker of Munich Center for Neuroscience - Brain and Mind, *MCN*^{LMU}
- 2004 – 2014 DFG-GRK 1091 (graduate program) “Orientation and Motion in Space” (PI and vice-coordinator)
- 2005 – 2015 DFG-GRK 1373 (int. graduate program) “Brain signalling: from neurons to circuits” (PI)
- 2010 – present Founder and Speaker of DFG-SFB 870 (Collaborative Research Center) “Assembly and Function of Neuronal Circuits in Sensory Processing” (speaker and PI)
- 2006 – present Initiator and Head of “M.Sc. Neuroscience”, Master program funded by Elite Network of Bavaria
- 2006 – preset Founder and Director of Graduate School of Systemic Neurosciences, *GNS*^{LMU} funded by German Excellence Initiative (2006-2019)
- 2009 – 2019 “Integrated research and treatment center IFB^{LMU}: Center for vestibular and ocular motor disorders” (PI and board member)
- 2012 – 2019 PI at ExcellenceCluster “Systems Neurology” SyNergy (PI); spokesman Christian Haass;