

Curriculum Vitae

Personal Data

Title	Prof. Dr. rer. nat.
First name	Markus
Name	Wöhr
Current position	W2 Professor of Biological Psychology
Current institution(s)/ site(s), country	Department of Experimental and Biological Psychology, Faculty of Psychology, Philipps-Universität Marburg (UMR), Germany Department of Brain and Cognition, Faculty of Psychology and Educational Sciences, KU Leuven, Belgium
Identifiers/ORCID	0000-0001-6986-5684

Qualifications and Career

Stages	Periods and Details	
Degree programme	2000–2006	Psychology, Eberhard-Karls Universität Tübingen and UMR, Germany
Doctorate	2008	Dissertation, Biological Psychology, “Ultrasonic vocalizations in mice and rats: Communicative signals reflecting motivational- affective states?”, UMR, Germany
Stages of academic/ professional career	2021–present	Professor (Hoogleraar) for Biological Psychology and Behavioural Pharmacology and Head of the Social and Affective Neuroscience Research Group, Dept. of Brain and Cognition, Faculty of Psychology and Educational Sciences, KU Leuven, Belgium
	2020	Associate Professor for Comparative and Integrative Animal Physiology, Dept. of Biology, Faculty of Science, University of Southern Denmark, Denmark
	2018–2020	Visiting Associate Professor, Dept. of Molecular and Cellular Physiology, School of Medicine, Stanford University, USA
	2017–present	Young Investigator Group Leader, Dept. of Experimental and Biological Psychology, Faculty of Psychology, UMR, Germany
	2009–2017	Scientific Employee, Dept. of Experimental and Biological Psychology, Faculty of Psychology, UMR, Germany
	2008–2009	Post-Doctoral Visiting Fellow, Laboratory of Behavioral Neuroscience, National Institutes of Health, Bethesda, USA
	2008	Pre-Doctoral Visiting Fellow, Division of Psychobiology and Psychopharmacology, CNR Institute of Neuroscience, Rome, Italy

Engagement in the Research System

- since 2022 Coordinator, Medium-scale FWO research infrastructure “An integrated platform for studying ultrasonic vocalizations in rodent models for brain disorders” (SoundsGood!), KU Leuven, Belgium
- since 2021 Steering Committee Member and Work Package Leader, EU Innovative Training Network “Brain development research excelling young ones in neurotechnologies and discoveries” (Serotonin and beyond), Nijmegen, The Netherlands
- 2019–2022 European Councillor (elected Fellow, 2022), International Behavioral Neuroscience Society (IBNS), San Antonio, USA

Editorial board memberships

- since 2020 Neuropharmacology
- since 2018 Frontiers in Behavioral Neuroscience
- since 2018 Associate Editor, Molecular Neuroscience
- 2017 Editor of a special issue entitled “Social Behavior from Rodents to Humans – Neural Foundations and Clinical Implications” (with Prof. Dr. Krach) in Current Topics in Behavioral Neuroscience
- 2013 Editor of a special issue on the “Neurobiology of Autism” (with Dr. Scattoni) in Behavioural Brain Research
- since 2008 Contribution to peer-review and evaluation of >150 manuscripts; ad-hoc reviewer for several funding agencies from different countries

Supervision of Researchers in Early Career Phases

- International and multidisciplinary team, with PhD students and postdoctoral researchers from Belgium, Canada, China, Germany, India, Italy, and Turkey.
- Currently, supervision of three PhD students and two postdoctoral researchers at KU Leuven, Belgium, and three PhD students and one postdoctoral researcher at UMR, Germany
- Six PhD students completed successfully under my supervision since 2015
- Member of PhD theses and habilitation committees in Belgium, France, Germany, New Zealand, Switzerland, and The Netherlands
- Training the next generation: organization of neuroscience graduate school on social behavior and ultrasonic vocalizations in rodents with laboratory hands-on training funded by the German Neuroscience Society (2012, 2014, 2016, 2018), combined with a lecture series, including many international rodent and human social behavior experts as speakers and with participants from Europe and the Americas. The lecture series recently resulted in a book on social behavior.

Scientific Results

Contributions:¹Conceptualization/Methodology, ²Analysis, ³Investigation, ⁴Funding Acquisition, ⁵Writing

Category A (10 selected publications out of 110)

Braun MD*, Kisko TM*, ..., **Wöhr M**^{1,2,3,4,5}: Long-term environmental impact on object recognition, spatial memory, and reversal learning capabilities in Cacna1c haploinsufficient rats. Hum Mol Genet 2019; 28(24):4113-4131. DOI: 10.1093/hmg/ddz235

- Krug A*, **Wöhr M**^{1,2,3,4,5}, ..., **Forstner AJ**, ..., Schwarting RKW*, **Kircher T***: Advanced paternal age as a risk factor for neurodevelopmental disorders: a translational study. *Mol Autism* 2020; 11(1):e54. DOI: 10.1186/s13229-020-00345-2
- Lackinger M, ..., **Wöhr M**^{1,2,3,4,5}, Schratt G: The placental-mammal specific miR379-410 microRNA cluster acts as a natural brake for sociability in mice. *EMBO Rep* 2019; 20(2): e46429. DOI: 10.15252/embr.201846429
- Michels S, **Wöhr M**^{1,5}, Schwarting RKW, **Culmsee C**: Psychiatric risk gene *Cacna1c* determines mitochondrial resilience against oxidative stress in neurons. *Cell Death Dis* 2018; 9(6):e645. DOI: 10.1038/s41419-018-0676-9
- Valluy J, ..., **Wöhr M**^{1,2,3,4,5}, ..., Schratt G: A coding-independent function of an alternative Ube3a transcript during neuronal development. *Nat Neurosci* 2015; 18(5):666-673. DOI: 10.1038/nn.3996
- Willuhn I, ..., **Wöhr M**^{1,2,3,4,5}: Phasic dopamine release in the nucleus accumbens in response to pro- social 50 kHz ultrasonic vocalizations in rats. *J Neurosci* 2014; 34(32):10616-10623. DOI: 10.1523/JNEUROSCI.1060-14.2014
- Wöhr M**^{1,2,3,4,5}: Ultrasonic vocalizations in Shank mouse models for autism spectrum disorders: detailed spectrographic analyses and developmental profiles. *Neurosci Biobehav Rev* 2014; 43:199-212. DOI: 10.1016/j.neubiorev.2014.03.021
- Wöhr M**^{1,2,3,4,5}: Measuring mania-like elevated mood through amphetamine-induced 50-kHz ultrasonic vocalizations in rats. *Br J Pharmacol* 2022; 179(17):4201-4219. DOI:10.1111/bph.15487
- Wöhr M**^{1,2,3,4,5}, Fong WM*, ..., Wernig M: Myt1l haploinsufficiency leads to obesity and multifaceted behavioral alterations in mice. *Mol Autism* 2022; 13(1):e19. DOI:10.1186/s13229-022-00497-3
- Wöhr M**^{1,2,3,4,5}, Orduz D*, ..., Schwaller B: Lack of parvalbumin in mice leads to behavioral deficits relevant to all human autism core symptoms and related neural morphofunctional abnormalities. *Transl Psychiatry* 2015; 5(3):e525. DOI:10.1038/tp.2015.19

Category B

- Homberg JR, ..., **Wöhr M**^{1,5}, ..., Genzel L: The continued need for animals to advance brain research. *Neuron* 2021; 109(15):2374-2379. DOI:10.1016/j.neuron.2021.07.015 (science communication)
- Bartsoen E, **Wöhr M**^{1,2,3,4,5}: Detailed spectrographic analysis of rat ultrasonic vocalizations emitted during the acoustic startle response test. *BioRxiv* 2023.02.24.529853. DOI: 10.1101/2023.02.24.529853 (preprint)
- Trotter JH, ..., **Wöhr M**^{1,2,3,4,5}, Südhof TC: Compartment-specific neurexin nanodomains orchestrate tripartite synapse assembly. *BioRxiv* 2020.08.21.262097. DOI: 10.1101/2020.08.21.262097 (preprint)
- Kircher T**, **Wöhr M**^{1,2,3,4,5}, **Nenadić I**, ..., **Alferink J**, **Culmsee C**, Garn H, **Hahn T**, ..., **Jansen A**, ..., **Dannlowski U**: Neurobiology of the major psychoses: A translational perspective on brain structure and function – the FOR 2107 consortium. *Eur Arch Psychiatry Clin Neurosci* 2019; 269(8):949-962. DOI: 10.1007/s00406-018-0943-x

Scientific Advisor of Avisoft Bioacoustics, the world leading company for ultrasound recording and playback products

Development of a wireless system for electrophysiological recordings in freely-moving rodents in collaboration with the company Thomas Recording GmbH, now commercially available:

<https://www.thomasrecording.com/thomas-wireless-system-tws>

Science communication (selected)

- since 2008 Various contributions to television and radio documentaries and series about science, often for children, including “1, 2, oder 3”, “Die Sendung mit der Maus”, “Einstein”, “Kopfball”, and “Nano – Die Welt von morgen”
- since 2008 Various contributions to print media formats, including “Der Spiegel”, often focusing on science, such as “Spektrum der Wissenschaft” and “Spick – Das schlaue Schülermagazin aus der Schweiz”

Academic Distinctions

- 2018–2020 Feodor Lynen Research Fellowship for Experienced Researchers, Alexander von Humboldt Foundation, Germany
- 2008–2009 Fellowship, National Institutes of Health, USA
- 2008 Fellowship, Gustav Adolf Lienert Foundation, Germany
- 2002–2006 Scholarship, Rosa Luxemburg Foundation, Germany

Other Information

n/a