Dr. rer. nat. Kathrin Kusch

GENERAL INFORMATION

Date of birth:	08.11.1980
Address:	Functional Auditory Genomics Group Institute for Auditory Neuroscience University Medical Center Göttingen Robert-Koch-Str. 40 37075 Göttingen
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Current position:	Group leader, Institute for Auditory Neuroscience

ACADEMIC EDUCATION

2004-2010	PhD Student, Institute for Microbiology, University of Greifswald (Prof. M. Hecker)
1999-2004	Diploma in Human Biology, University of Greifswald (Dr. S. Engelmann)

SCIENTIFIC DEGREES

2012	PhD (Dr. rer. nat.), University of Greifswald (Prof. M. Hecker)

PROFESSIONAL CAREER AFTER COMPLETING DEGREE

Since 2021	Group leader, Functional Auditory Genomics Group, Institute for Auditory Neuroscience, University Medical Center, Göttingen
2020-2021	Staff Scientist, Institute for Auditory Neuroscience, University Medical Center, Göttingen
2011-2020	Postdoctoral Fellow, Department of Neurogenetics, Max Planck Institute of Experimental Medicine, Göttingen

MISCELLANEOUS

Fellowships, Awards and Honors (Selected)

2004-2008	Fellow of the Graduate school GRK840, University of Greifswald

Further Scientific Activities (Selected)

2015-2020	Member of the MPIEM Institutional Animal Care and Use Committee (IACUC) and the MPIEM animal house committee
2013-2020	Deputy Officer for Equal Opportunities, Max Planck Institute of Experimental Medicine, Göttingen
2016-2017	Mentee of the KaWirMento-program, University of Göttingen

Parental Leave

2009-2010	8 months
2007-2008	7 months

SELECTED PUBLICATIONS (with scientific assurance)

1. Meschkat M, Steyer AM, Weil MT, **Kusch K**, Jahn O, Piepkorn L, Agüi Gonzalez P, Phan NTN, Ruhwedel T, Sadowski B, Rizzoli SO, Werner HB, Ehrenreich H, Nave KA, Möbius W (2022) White matter integrity requires continuous myelin synthesis at the inner tongue in mice. Nat Commun 13: 1163.
2. Rankovic V, Vogl C, Dörje NM, Bahader I, Duque Afonso CJ, Thirumalai A, Weber T, **Kusch K**, Strenzke N, Moser T (2021) Overloaded adeno-associated virus as a novel gene therapeutic tool for otoferlin-related deafness. Front Mol Neurosci 13: 600051.
3. Trevisiol A*, **Kusch K***, Steyer AM, Gregor I, Nardis C, Winkler U, Köhler S, Restrepo A, Möbius W, Werner HB, Nave KA, Hirrlinger J (2020) Structural myelin defects are

associated with low axonal ATP levels but rapid recovery from energy deprivation in a mouse model of spastic paraplegia. PLoS Biol 18(11): e3000943.

4. Moore S, Meschkat M, Ruhwedel T, Trevisiol A, Tzvetanova ID, Battefeld A, **Kusch K**, Kole MHP, Strenzke N, Möbius W, de Hoz L, Nave KA (2020) A role of oligodendrocytes in information processing. Nat Commun 2020 11(1): 5497.
5. Eichel MA, Gargareta VI, D'Este E, Fledrich R, Kungl T, Buscham TJ, Lüders KA, Miracle C, Jung RB, Distler U, **Kusch K**, Möbius W, Hülsmann S, Tenzer S, Nave KA, Werner HB (2020) CMTM6 expressed on the adaxonal Schwann cell surface restricts axonal diameters in peripheral Nerves. Nat Commun 11(1): 4514.
6. Jahn O, Siems SB, Kusch K, Hesse D, Jung RB, Liepold T, Uecker M, Sun T, Werner HB (2020) Proteome profile of peripheral myelin in healthy mice and in a neuropathy model. Elife 49: e51406.
7. Fledrich R, Akkermann D, Schütza V, Abdelaal TA, Hermes D, Schäffner E, Soto Bernardini MC, Götze T, Klink A, **Kusch K**, Krueger M, Kungl T, Frydrychowicz C, Möbius W, Brück W, Mueller WC, Bechmann I, Sereda MW, Schwab MH, Nave KA, Stassart RM (2019) NRG1 type I dependent autoparacrine stimulation of Schwann cells in onion bulbs of peripheral neuropathies. Nat Commun 10(1): 1840.
8. Stumpf SK, Berghoff SA, Trevisiol A, Spieth L, Düking T, Schneider LV, Schlaphoff L, Dreha Kulaczewski S, Bley A, Burfeind D, **Kusch K**, Mitkovski M, Ruhwedel T, Guder P, Röhse H, Denecke J, Gärtner J, Möbius W, Nave KA, Saher G (2019) Ketogenic diet ameliorates axonal defects and promotes myelination in Pelizaeus-Merzbacher disease. Acta Neuropathol 138(1): 147-161.
9. **Kusch K**, Uecker M, Liepold T, Möbius W, Hoffmann C, Neumann H, Werner HB, Jahn O (2017) Partial immunoblotting of 2D-gels: a novel method to identify post-translationally modified proteins exemplified for the myelin acetylome. Proteomes 5(1).

*Equal contribution