

# Curriculum vitae

## Prof. Dr. Dr. Hannelore Ehrenreich, MD, DVM

Clinical Neuroscience, Max Planck Institute of Experimental Medicine, Hermann-Rein-Str.3, 37075 Göttingen, Germany  
Phone: +49-551-3899-628; FAX: -670; E-mail: [ehrenreich@em.mpg.de](mailto:ehrenreich@em.mpg.de)

### Training

1980	Graduation from Veterinary Medicine, Universities of Hannover/Munich
1981	Doctor of Veterinary Medicine, University of Munich
1987	Graduation from Medicine, University of Munich
1989	Doctor of Medicine, University of Munich
1994	Habilitation (Neurology, Psychiatry, Neuroendocrinology), University Göttingen
1995	Board Certificate for Neurology & Psychiatry, Göttingen
1998	Professor of Neurology & Psychiatry, University of Göttingen
2004	Board Certificate for Psychotherapy
2008	Professor of Biology & Psychology, University of Göttingen ( <i>Honorarprof.</i> )

### Academic positions & appointments

1980-1981	Clinical Fellow, Veterinary Gynaecology & Obstetrics, University of Munich
1982-1984	Research Fellow, Max Planck Institute of Psychiatry, Munich
1984-1986	Clinical Fellow, Department of Internal Medicine, University of Munich
1987-1988	Residency, Department of Neurology, University of Munich
1989-1991	Postdoctoral Fellow NIAID (Dr. Anthony S. Fauci), NIH, Bethesda, MD, USA
1992-1995	Residency, Departments of Neurology and Psychiatry, University of Göttingen
1996-2003	Consultant of Neurology and Psychiatry, University of Göttingen
1995 - present	Head, Clinical Neuroscience, MPI of Experimental Medicine

### Collaborative Research (selected)

2005-2019	Coordinator of C1 area ( <i>'Neuropsychiatry'</i> ) of the DFG Research Center for Nanoscale Microscopy and Molecular Physiology of the Brain (CNMPB), Göttingen, Germany
since 2007	Member (PI) of the GGNB (Göttingen Graduate School for Neuroscience, Biophysics and Molecular Biosciences)
since 2006	Member (PI; Faculty) of several International Max Planck Research Schools (IMPRS Neuroscience, IMPRS Genome Science) and CSN (Center of Systems Neuroscience)
since 2008	Member (PI) of several EU consortia (e.g. EU-AIMS, ExtraBRAIN EU-FP7, ERA-NET Neuron, NeuConnect)

### Awards & honors (selected)

1985	DAAD Guest Lecturer, University of the Philippines, Manila
1988 - 1991	BMBF Postdoc with Dr. Anthony S. Fauci, NIAID - NIH, Bethesda, U.S.A.
1992 - 1995	DFG Habilitation Stipend (3 years), University of Göttingen
2000 - 2002	Vice President, Georg-August-University, Göttingen
2002 - 2010	Member of several US Advisory Boards Neuroprotection/Neuroregeneration
2003 - 2016	Member of the Advisory Board, Medical University, Hannover
2005	Wilhelm-Feuerlein Award for Addiction Research
2007 - present	Member of the Felix-Wankel Kuratorium (Animal Protection)
2010 - 2019	Member of the Scientific Advisory Board, German Primate Center (DPZ)
2015 - present	Member of the Scientific Advisory Board, Biocenter Würzburg
2016 - present	Member of the Leopoldina, German National Academy of Science
2019 - present	ERC (European Research Council) Panel Member
2020	Jean Delay Prize of the World Psychiatric Association (WPA)

## 15 recent key papers (out of ~290 peer reviewed original papers listed in PubMed)

Steixner-Kumar AA, Daguano Gastaldi V, Seidel J, Rosenberger A, Begemann M, **Ehrenreich H (2021)** Preadult polytoxicomania – strong environmental underpinnings and first genetic hints. **Mol Psychiatry**, *in press*.

Butt UJ, Steixner-Kumar AA, Depp C, Sun T, Hassouna I, Wüstefeld L, Arinrad S, Zillmann MR, Schopf N, Fernandez Garcia-Agudo L, Mohrmann L, Bode U, Ronnenberg A, Hindermann M, Goebbels S, Bonn S, Katschinski DM, Miskowiak KW, Nave KA, **Ehrenreich H (2020)** Hippocampal neurons respond to brain activity with functional hypoxia, **Mol Psychiatry**, doi: 10.1038/s41380-020-00988-w.

Wakhloo D, Scharkowski F, Curto Y, Butt UJ, Bansal V, Steixner-Kumar AA, Wüstefeld L, Rajput A, Arinrad S, Zillmann MR, Seelbach A, Hassouna I, Schneider K, Ibrahim AQ, Werner HB, Martens H, Miskowiak K, Wojcik SM, Bonn S, Nacher J, Nave KA, **Ehrenreich H (2020)** Functional hypoxia drives neuroplasticity and neurogenesis via brain erythropoietin. **Nature Communications** 11(1):1313, doi: 10.1038/s41467-020-15041-1.

Pan H, Steixner-Kumar AA, Seelbach A, Deutsch N, Ronnenberg A, Tapken D, Ahsen N, Mitjans M, Worthmann H, Trippe R, Klein-Schmidt C, Schopf N, Rentzsch K, Begemann M, Wienands J, Stöcker W, Weissenborn K, Hollmann M, Nave KA, Lühder F, **Ehrenreich H (2020)** Multiple inducers and novel roles of autoantibodies against the obligatory NMDAR subunit NR1: A translational study from chronic life stress to brain injury; **Mol Psychiatry**, doi: 10.1038/s41380-020-0672-1.

Pan H, Oliveira B, Saher G, Dere E, Tapken D, Mitjans M, Seidel J, Wesolowski J, Wakhloo D, Klein-Schmidt C, Ronnenberg A, Schwabe K, Trippe R, Mätz-Rensing K, Berghoff S, Al-Krinawe Y, Martens H, Begemann M, Stöcker W, Kaup FJ, Mischke R, Boretius S, Nave KA, Krauss JK, Hollmann M, Lühder F, **Ehrenreich H (2019)** Uncoupling the widespread occurrence of anti-NMDAR1 autoantibodies from neuropsychiatric disease in a novel autoimmune model; **Mol Psychiatry**, doi: 10.1038/s41380-017-0011-3.

Janova H, Arinrad S, Balmuth E, Mitjans M, Hertel J, Habes M, Bittner RA, Pan H, Goebbels S, Begemann M, Gerwig UC, Langner S, Werner HB, Kittel-Schneider S, Homuth G, Davatzikos C, Völzke H, West BL, Reif A, Grabe HJ, Boretius S, **Ehrenreich H\***, Nave KA (2018) Microglia ablation alleviates myelin-associated catatonic signs in mice, **J Clin Invest**, 128(2):734-745. doi: 10.1172/JCI 97032. **\*shared last authorship**

Mitjans M, Seidel J, Begemann M, Bockhop F, Moya-Higueras J, Bansal V, Wesolowski J, Seelbach A, Ibáñez MI, Kovacevic F, Duvar O, Fañanas L, Wolf HU, Ortet G, Zwanzger P, Klein V, Lange I, Tänzer A, Dudeck M, Penke L, van Elst LT, Bittner RA, Schmidmeier R, Freese R, Müller-Isberner R, Wilfang J, Bliesener T, Bonn S, Poustka L, Müller JL, Arias B, **Ehrenreich H. (2018)** Violent aggression predicted by multiple pre-adult environmental hits. **Mol Psychiatry** doi: 10.1038/s41380-018-0043-3.

**Ehrenreich H**, Mitjans M, Van der Auwera S, Centeno TP, Begemann M, Grabe HJ, Bonn S, Nave KA (2018) OTTO: A new strategy to extract mental disease-relevant combinations of GWAS hits from individuals; **Mol Psychiatry**, doi: 10.1038/mp.2016.208.

Bansal V, Mitjans M, Burik CAP, Linnér RK, Okbay A, Rietveld CA, Begemann M, Bonn S, Ripke S, de Vlaming R, Nivard MG, **Ehrenreich H\***, Koellinger PD (2018) Genome-wide association study results for educational attainment aid in identifying genetic heterogeneity of schizophrenia. **Nature Communications** 9(1):3078 doi: 10.1038/s41467-018-05510-z. **\*shared last authorship**

Castillo-Gomez E, Oliveira B, Tapken D, Bertrand S, Klein-Schmidt C, Pan H, Zafeiriou P, Steiner J, Jurek B, Trippe R, Prüss H, Zimmermann W-H, Bertrand D, Hollmann M, **Ehrenreich H (2017)** All naturally occurring autoantibodies against the NMDA receptor subunit NR1 have pathogenic potential irrespective of epitope and immunoglobulin class. **Mol Psychiatry**, doi: 10.1038/mp.2016.125.

Hassouna I, Ott C, Dahm L, Offen N, Neher RA, Mitkovski M, Winkler D, Sperling S, Fries L, Goebbels S, Vreja IC, Hagemeyer N, Dittrich M, Rossetti MF, Kröhnert K, Hannke K, Boretius S, Zeug A, Höschen C, Dandekar T, Dere E, Neher E, Rizzoli SO, Nave KA, Sirén AL, **Ehrenreich H (2016)** Revisiting adult neurogenesis and the role of erythropoietin for neuronal and oligodendroglial differentiation in the hippocampus. **Mol Psychiatry**, doi: 10.1038/mp.2015.212.

Castillo-Gomez E, Kästner A, Steiner J, Schneider A, Hettling B, Poggi G, Ostehr K, Uhr M, Asif AR, Matzke M, Schmidt U, Pfander V, Hammer C, Schulz TF, Binder L, Stöcker W, Weber F, **Ehrenreich H (2016)** The brain as immunoprecipitator of serum autoantibodies against N-Methyl-D-aspartate receptor subunit NR1. **Ann Neurol**. 79:144-51. doi: 10.1002/ana.24545.

Stepniak B, Kästner A, Poggi G, Mitjans M, Begemann M, Hartmann A, Van der Auwera S, Sananbenesi F, Krueger-Burg D, Matuszko G, Brosi C, Homuth G, Völzke H, Benseler F, Bagni C, Fischer U, Dityatev A, Grabe HJ, Rujescu D, Fischer A, **Ehrenreich H (2015)** Accumulated common variants in the broader fragile X gene family modulate autistic phenotypes. **EMBO Mol Med**. 7(12):1565-79. doi: 10.15252/emmm.201505696.

Stepniak B, Papiol S, Hammer C, Ramin A, Everts S, Hennig L, Begemann M, **Ehrenreich H (2014)** Accumulated environmental risk determining age at schizophrenia onset: a deep phenotyping-based study. **Lancet Psychiatry**. 2014 Nov;1(6):444-53. doi: 10.1016/S2215-0366(14)70379-7.

Hammer C, Stepniak B, Schneider A, Papiol S, Tantra M, Begemann M, Sirén AL, Pardo LA, Sperling S, Mohd Jofry S, Gurvich A, Jensen N, Ostmeier K, Lühder F, Probst C, Martens H, Gillis M, Saher G, Assogna F, Spalletta G, Stöcker W, Schulz TF, Nave KA, **Ehrenreich H (2014)** Neuropsychiatric disease relevance of circulating anti-NMDA receptor autoantibodies depends on blood-brain barrier integrity. **Mol Psychiatry** 19(10):1143-9. doi: 10.1038/mp.2013.110.