

## Erich Wanker

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Neuroproteomics  
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### Curriculum vitae

since 2001	Professor (C4), Molecular Medicine, Charité – Universitätsmedizin, Berlin
since 2001	Principle Investigator, Neuroproteomics and Neurodegeneration, MDC, Berlin
1999 – 2001	Independent group leader (C3), Max Planck Institute for Molecular Genetics, Berlin
1995 – 1999	Group leader, Max Planck Institute for Molecular Genetics, Berlin
1993 – 1995	Postdoctoral fellow, Department of Biochemistry, University of California, Los Angeles
1990 – 1992	Research assistant, Department of Biotechnology, Technical University of Graz
1991	Visiting researcher, Department of Microbiology, TNO Medical Biological Laboratory, Rijswijk, The Netherlands
1989 – 1992	PhD thesis, Department of Biotechnology, Technical University of Graz

### Research fields

Our group is active in the field of neurodegenerative diseases with the following major areas:

- Understanding the molecular basis of neurodegenerative diseases such as Huntington's, Alzheimer's and Parkinson's diseases using various molecular biology and functional genomic approaches
- Identification and characterization of proteins and small molecules that modulate protein misfolding pathways in Alzheimer's, Parkinson's, and Huntington's disease
- High-throughput protein-protein interaction studies; development of innovative interactomics methods and benchmarking/validation approaches

### Activities in the scientific community, honors, awards

2017	Chair, Gordon Research Conference CAG Triplet Repeat Disorders, USA
2015	Vice Chair, Gordon Research Conference CAG Triplet Repeat Disorders, Il Ciocco, Lucca, Italy
2014 – 2018	Coordinator, Berlin Institute of Health (BIH), Collaborative Research Grant, BMBF
2013 – 2016	Coordinator, ERA-Net NEURON, BMBF
2012 – 2015	Steering Committee Member, GERAMY, Rare Disease, BMBF
2011 – 2015	Scientific Advisory Board Member, EU FP 7 Systems Biology, Consortium "Syscilia"
2010 – 2014	Steering Committee Member, SynSys (EU, FP7)
2008 – 2012	Deputy Coordinator, Helmholtz Alliances on Systems Biology
2008 – 2012	Coordinator, Consortium NeuroNet, National Genome Research Network (NGFN-Plus)
2008	Erwin Schrödinger Award, Helmholtz Association (HGF), Germany
2007 – 2012	Coordinator, MDC Systems Biology Network & Technology Platform (MSBN)
2006	GoBio Award, Bundesministerium für Bildung u. Forschung (BMBF), Germany

2004 – 2008 Project committee member, National Genome Research Network (NGFN-2)  
 2004 – 2008 Coordinator, Systematic Methodological Platform Protein (NGFN-2)  
 2001 – 2009 Board member, Collaborative Research Center (SFB) 577  
 2001 – 2006 Coordinator, Research Unit SCA3, German Research Foundation (DFG)  
 2001 – 2004 Coordinator, Core Area Platform Protein Interaction (NGFN-1)  
 2000 James Heinemann Research Award, Minna and James Heinemann Foundation  
 1998 BioFuture Research Award, BMBF, Germany  
 Since 1998 Investigator, Huntington's Disease Society of America (HDSA)  
 1997 – 2000 Consultant, GPC Biotech Genome Pharmaceutical Corp. AG, Martinsried  
 1993 – 1995 Erwin Schrödinger Fellowship, FWF Austrian Science Fund

## Selected publications

Buntru, A., Trepte, P., Klockmeier, K., Schnoegl, S. and Wanker, E.E. (2016) Current approaches towards quantitative mapping of the interactome. *Front Genet* 7(74).

Trepte P, Buntru A, Klockmeier K, Willmore L, Arumughan A, Secker C, Zenkner M, Brusendorf L, Rau K, Redel A, Wanker EE. DULIP: A Dual Luminescence-Based Co-Immunoprecipitation Assay for Interactome Mapping in Mammalian Cells. *J Mol Biol.* 2015;427(21):3375-88.

Stroedicke M, Bounab Y, Stempel N, Klockmeier K, Yigit S, Friedrich RP, Chaurasia G, Li S, Hesse F, Riechers SP, Russ J, Nicoletti C, Boeddrich A, Wiglenda T, Haenig C, Schnoegl S, Fournier D, Graham RK, Hayden MR, Sigrist S, Bates GP, Priller J, Andrade-Navarro MA, Futschik ME, Wanker EE. Systematic interaction network filtering identifies CRMP1 as a novel suppressor of huntingtin misfolding and neurotoxicity. *Genome Res.* 2015;25(5):701-13.

Petrakis S, Rasko T, Russ J, Friedrich RP, Stroedicke M, Riechers SP, Muehlenberg K, Moller A, Reinhardt A, Vinayagam A, Schaefer MH, Boutros M, Tricoire H, Andrade-Navarro MA, Wanker EE. Identification of human proteins that modify misfolding and proteotoxicity of pathogenic ataxin-1. *PLoS Genet.* 2012;8(8):e1002897.

Bieschke J, Herbst M, Wiglenda T, Friedrich RP, Boeddrich A, Schiele F, Kleckers D, Lopez del Amo JM, Gruning BA, Wang Q, Schmidt MR, Lurz R, Anwyl R, Schnoegl S, Fandrich M, Frank RF, Reif B, Gunther S, Walsh DM, Wanker EE. Small-molecule conversion of toxic oligomers to nontoxic beta-sheet-rich amyloid fibrils. *Nat Chem Biol.* 2012;8(1):93-101.

Bieschke J, Russ J, Friedrich RP, Ehrnhoefer DE, Wobst H, Neugebauer K, Wanker EE. EGCG remodels mature alpha-synuclein and amyloid-beta fibrils and reduces cellular toxicity. *Proceedings of the National Academy of Sciences of the United States of America.* 2010;107(17):7710-5.

Ehrnhoefer DE, Bieschke J, Boeddrich A, Herbst M, Masino L, Lurz R, Engemann S, Pastore A, Wanker EE. EGCG redirects amyloidogenic polypeptides into unstructured, off-pathway oligomers. *Nat Struct Mol Biol.* 2008;15(6):558-66.

Boeddrich A, Gaumer S, Haacke A, Tzvetkov N, Albrecht M, Evert BO, Muller EC, Lurz R, Breuer P, Schugardt N, Plassmann S, Xu K, Warrick JM, Suopanki J, Wullner U, Frank R, Hartl UF, Bonini NM, Wanker EE. An arginine/lysine-rich motif is crucial for VCP/p97-mediated modulation of ataxin-3 fibrillogenesis. *Embo J.* 2006;25(7):1547-58.

Stelzl U, Worm U, Lalowski M, Haenig C, Brembeck FH, Goehler H, Stroedicke M, Zenkner M, Schoenherr A, Koeppen S, Timm J, Mintzlaff S, Abraham C, Bock N, Kietzmann S, Goedde A, Toksoz E, Droege A, Krobitsch S, Korn B, Birchmeier W, Lehrach H, Wanker EE. A human protein-protein interaction network: a resource for annotating the proteome. *Cell.* 2005;122(6):957-68.

Goehler H, Lalowski M, Stelzl U, Waelter S, Stroedicke M, Worm U, Droege A, Lindenberg KS, Knoblich M, Haenig C, Herbst M, Suopanki J, Scherzinger E, Abraham C, Bauer B, Hasenbank R, Fritzsche A, Ludewig AH, Bussow K, Coleman SH, Gutekunst CA, Landwehrmeyer BG, Lehrach H,

Wanker EE. A protein interaction network links GIT1, an enhancer of huntingtin aggregation, to Huntington's disease. *Mol Cell*. 2004;15(6):853-65.