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Professor of Biochemistry

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Education

1983 Ph.D. (Dr.rer.nat.) Peptide Chemistry, Macromolecular Chemistry, University of Aachen, Germany
1981 Dipl. Chem., Macromolecular Chemistry, University of Aachen, Germany
1978 IAESTE Industrial Traineeship, AB Volvo, R&D, Gothenburg, Sweden
1975 IAESTE Industrial Traineeship, Hellenic Aspropyrgos Refinery, Quality Control. Athens, Greece

Professional Employment

Max Planck Institute of Psychiatry

2002-Present Head, Proteomics and Biomarkers
2003-Present Professor, Department of Biochemistry, University of Munich
2004-Present Faculty, International Max Planck Research School for Molecular Life Sciences
2009-Present Faculty, Graduate Program of Systemic Neurosciences, University of Munich
2015-Present Faculty, International Max Planck Research School for Translational Psychiatry
2019-Present Adjunct Faculty, CAS-MPG Partner Institute of Computational Biology, Shanghai

University of California, San Francisco, Howard Hughes Medical Institute

1986-2002 Director, Protein Structure Laboratory
1986-1988 Instructor of Medicine
1988-1994 Assistant Professor of Medicine
1993-2002 Associate Investigator, Cardiovascular Research Institute
1994-2000 Associate Professor of Medicine
2000-2002 Professor of Medicine

Roche Institute of Molecular Biology, Nutley, NJ

1983-1986 Postdoctoral Fellow, Department of Cell Biology

University of Aachen

1981-1982 Research Associate, Macromolecular Chemistry, University of Aachen, Germany
1982-1983 Research Associate, German Wool Research Institute, University of Aachen, Germany

Professional Activities

2004-2008 BMBF National Genome Research Network, Project Committee
2005-2011 Association of Biomolecular Research Facilities, Proteomics Research Group
2007-2010 Association of Biomolecular Research Facilities, Executive Board
2007-Present fNIH Biomarkers Consortium, Neuroscience Steering Committee
2008-Present Association of Biomolecular Research Facilities, Metabolomics Research Group
2010-2015 EU Innovative Medicines Initiative, NEWMEDS, Scientific Advisory Board
2011-2012 American Society for Mass Spectrometry, Pharmaceuticals Interest Group
2011-Present International Expert Panel, National Medical Research Council, Singapore
2016-2017 Visiting Scholar, University of California, San Diego, Skaggs School of Pharmacy
2017-2020 Molecular Neuropsychiatry, Editorial Board
2017-Present External Advisory Board, Hamartoma P01, Harvard University
2018-Present Academic Advisor, Global Distinguished Scientist Center of Nanjing University
2018-Present LMU-China Academic Network, Advisory Board
2019-Present Visiting Scientist, CAS Kunming Institute of Zoology
2020-Present Cohen Veterans Bioscience, Metabolomics Working Group
2021 Review Panel, Canadian Foundation for Innovation, Major Science Initiatives Fund

Awards and Grants

1983 Wilhelm Borchers Medal, University of Aachen
1983-1986 Postdoctoral Fellowship, Roche Institute of Molecular Biology
1987-1988 Research Grant, Scleroderma Society
1987-1988 Individual Investigator Research Grant, Academic Senate, UC San Francisco
1988-1989 Research Evaluation and Allocation Committee, UC San Francisco
1988-1990 United Scleroderma Foundation
1993-1996 American Heart Association Research Grant
1996-2001 American Heart Association, California Affiliate Research Grant
1998-2001 National Science Foundation, Research Award
2002-2004 Australian Research Council, Research Grant, Partner Investigator
2004-2005 Bavaria California Technology Grant
2004-2008 BMBF National Genome Research Network, Neuronet
2004-2008 BMBF National Genome Research Network, Exploratory Project Grant
2006-2011 BMBF QuantPro-Quantitative Analysis of Dynamic Processes in Living Systems
2008-2013 BMBF National Genome Research Network Plus, MooDS
2009-2012 BMBF Molecular Diagnostics
2013-2018 NIH Common Fund, Collaborative Activities to Promote Metabolomics Research
2014-2018 ERANET-NEURON Mental Disorders
2015-2018 KMU-Innovativ
2019-2022 CAS Presidents International Fellowship Initiative, Visiting Scientist Program

Memberships

American College of Neuropsychopharmacology
American Society for Mass Spectrometry
US HUPO
German Chemical Society

Publications

- Tkachev A, Stekolshchikova E, Bobrovskiy DM, Anikanov N, Ogurtsova P, Park DI, Horn AKE, Petrova D, Khrameeva E, Golub MS, Turck CW, Khaitovich P. (2021) Long-Term Fluoxetine Administration Causes Substantial Lipidome Alteration of the Juvenile Macaque Brain. *Int J Mol Sci* 22:8089. [[Pubmed](#)]
- Martinelli S, Anderzhanova EA, Bajaj T, Wiechmann S, Dethloff F, Weckmann K, Heinz DE, Ebert T, Hartmann J, Geiger TM, Döngi M, Hafner K, Pöhlmann ML, Jollans L, Philipson A, Schmidt SV, Schmidt U, Maccarrone G, Stein V, Hausch F, Turck CW, Schmidt MV, Gellner AK, Kuster B, Gassen NC. (2021) Stress-primed secretory autophagy promotes extracellular BDNF maturation by enhancing MMP9 secretion. *Nat Commun* 12:4643. [[Pubmed](#)]
- Zhang W, Wang W, Zhao M, Turck CW, Zhu Y, Wang G-Z. (2021) Rapid body-wide transcriptomic turnover during Rhesus macaque perinatal development. *Front Physiol* 12:690540. [[Pubmed](#)]
- Filiou MD, Nussbaumer M, Teplytska L, Turck CW. (2021) Behavioral and Metabolome Differences between C57BL/6 and DBA/2 Mouse Strains: Implications for Their Use as Models for Depression- and Anxiety-Like phenotypes. *Metabolites* 11:128. [[Pubmed](#)]
- Bonnin EA, Fornasiero EF, Lange F, Turck CW, Rizzoli SO. (2021) NanoSIMS observations of mouse retinal cells reveal strict metabolic controls on nitrogen turnover. *BMC Mol Cell Biol* 22:5. [[Pubmed](#)]
- Li H, Su L-Y, Yang L, Li M, Liu Q, Li Z, Hu Y, Li H, Wu S, Wang W, Hu Y, Wang Z, Rizak JD, Huang B, Xu M, Wu J, Lv L-B, Turck CW, Yin Y, Yao Y-G, Su B, Hu X. (2021) A cynomolgus monkey with naturally occurring Parkinson's disease. *Natl Sci Rev.* 8 [[Pubmed](#)]
- Sun L, Ma J, Turck CW, Xu P, Wang GZ. (2020) Genome-wide circadian regulation: A unique system for computational biology. *Comput Struct Biotechnol J* 18:1914-1924. [[Pubmed](#)]

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- Capitano JP, Dethloff F, Turck CW. (2020) Lipid metabolism is associated with temperament, corticosteroid, and hematological measures in infant rhesus monkeys (*Macaca mulatta*). *Zool Res* 41:709-714. [[PubMed](#)]
- Martins-de-Souza D, Guest PC, Reis-de-Oliveira G, Schmitt A, Falkai P, Turck CW. (2020) An overview of the human brain myelin proteome and differences associated with schizophrenia. *World J Biol Psychiatry* 21:1-17. [[PubMed](#)]
- Dethloff F, Vargas F, Elijah E, Quinn R, Park DI, Herzog DP, Müller MB, Gentry EC, Knight R, Gonzalez A, Dorrestein PC, Turck CW. (2020) Paroxetine administration affects microbiota and bile acid levels in mice. *Front Psychiatry* 11:518. [[PubMed](#)]
- Park DI, Novak B, Yan Y, Kaya ME, Turck CW. (2020) Paroxetine binding and activation of phosphofructokinase implicates energy metabolism in antidepressant mode of action. *J Psychiatr Res* 129:8-14. [[PubMed](#)]
- Joaquim HPG, Costa AC, Talib LL, Dethloff F, Serpa MH, Zanetti MV, van de Bilt M, Turck CW. (2020) Plasma Metabolite Profiles in First Episode Psychosis: Exploring Symptoms Heterogeneity/Severity in Schizophrenia and Bipolar Disorder Cohorts. *Front Psychiatry* 11:496. [[PubMed](#)]
- Ko HG, Park DI, Lee JH, Turck CW, Kaang BK. (2020) Proteomic analysis of synaptic protein turnover in the anterior cingulate cortex after nerve injury. *Mol Brain* 13:19. [[PubMed](#)]
- Turck CW, Mak TD, Goudarzi M, Salek RM, Cheema AK. (2020) The ABRF Metabolomics Research Group 2016 Exploratory Study: Investigation of Data Analysis Methods for Untargeted Metabolomics. *Metabolites* 10 pii: E128. [[PubMed](#)]
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- Weckmann K, Deery MJ, Howard JA, Feret R, Asara JM, Dethloff F, Filiou MD, Labermaier C, Maccarrone G, Lilley KS, Mueller M, Turck CW. (2019) Ketamine's effects on the glutamatergic and GABAergic systems: a proteomics and metabolomics study in mice. *Mol Neuropsychiatry* 5:42-51. [[PubMed](#)]
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- Turck CW, Filiou MD. (2015) What Have Mass Spectrometry-Based Proteomics and Metabolomics (Not) Taught Us about Psychiatric Disorders? *Mol Neuropsychiatry* 1:69-75. [[Pubmed](#)]
- Kao CY, Anderzhanova E, Asara JM, Wotjak CT, Turck CW. (2015) NextGen brain microdialysis – applying modern metabolomics technology to the analysis of extracellular fluid in the central nervous system. *Mol Neuropsychiatry* 1:60-67. [[Pubmed](#)]
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