

Personal Data

Title	Prof. Dr. rer. nat.
First Name	André
Name	Fischer
Current position	Professor (W3) for Epigenetics in Neurodegenerative Diseases
Current institution	Department for Psychiatry and Psychotherapy, University Medical Center Göttingen (UMG); German Center for Neurodegenerative Diseases (DZNE) (Speaker); Department for Systems Medicine and Epigenetics in Neurodegenerative Diseases, German Center for Neurodegenerative Diseases (DZNE) (Director), Göttingen, Germany
ORCID	0000-0001-8546-1161

Qualifications and Career

Stages	Periods and Details	
Degree programme	1994 – 2000	Studies of Biology, Supervisors/mentors: Prof. Dr. Joachim Spiess; University of Göttingen, Germany
Doctorate	2002	Dr. rer. nat. in Neuroscience, Supervisors/mentors: Prof. Dr. Joachim Spiess, Department of Neuroendocrinology, Max Planck Institute of Experimental Medicine, Göttingen, Germany
Stages of academic/ professional career	Since 2015	Director, Department for Systems Medicine and Epigenetics in Neurodegenerative Diseases, German Center for Neurodegenerative Diseases (DZNE), Speaker of the DZNE site, Göttingen, Germany
	Since 2011	Professor (W3) of Epigenetics in Neurodegenerative Diseases, Department of Psychiatry and Psychotherapy, University Medical Center Göttingen
	2007 – 2011	Independent Group Leader, European Neuroscience Institute (ENI), Göttingen, Germany
	2006	Postdoctoral Fellow, Massachusetts Institute of Technology, Boston, U. S. A.
	2003 – 2005	Postdoctoral Fellow, Harvard Medical School, Pathology Department, Boston, U. S. A.

Supplementary Career Information

You may **voluntarily** enter supplementary information relating to your career or special personal circumstances if you feel that this information may be relevant to the appropriate review and evaluation of your academic achievements.

e.g. Parental leave YYYY – YYYY/not applicable

not applicable

Activities in the Research System

Since 2023	PI of the JPND consortium EPI-3E (Defining (sex and age) cell-specific epigenetic mechanisms underlying Environmental Enrichment/Exercise as non-pharmacological intervention for Alzheimer's and Huntington's disease and related potential noninvasive biomarkers.)
Since 2023	Co-speaker and PI of the DZHK Innovation Cluster "Importance of brain regions on heart failure progression"
Since 2022	Co-speaker and PI of the DFG funded Graduate School 2824 Heart and brain diseases integrative research across organs"
Since 2022	PI of the NIH Projekt RF1AG078299 (USA). „MicroRNA as a diagnostic and prognostic biomarker of Alzheimer's disease"
Since 2022	Coordinator and PI of the ERA-NET Neuron Project EPINEURODEVO (EU Horizon2020)
Since 2019	PI of the GoBIO project miRassay by the Federal Ministry of Science and Education
Since 2018	President of the European Molecular and Cellular Cognition Society (EMCCS)
Since 2018	Member of Governing Board of the Federation of European Neuroscience Societies (FENS)
Since 2017	Speaker, Priority Programme 1738 "Emerging roles of non-coding RNAs in nervous system development, plasticity and diseases" funded by the German Research Foundation (DFG)
2016-2022	Coordinador and PI for EPIFUS (Role of FUS in epigenetic regulations in ALS and FTD) ANR and DFG
2014-2018	PI of the JPND Consortium RiMOD (Risk and Modifying factors in Frontotemporal Dementia)
Since 2016	Treasurer, Molecular and Cellular Cognition Society
2013-2018	PI of the INTEGRAMENT Consortium (Integrated understanding of causes and mechanisms in mental disorders) of the Federal Ministry of Science and Education
2013-2016	PI of the ENGRAMM consortium (Integrated understanding of causes and mechanisms in mental disorders) Leibniz Society
Since 2013	Advisory Board Member, Rodin Therapeutics (Boston, U. S. A.)
2013-2017	Coordinator and PI of the Network of Excellence in Neurodegeneration Consortium Neuro-miR (Helmholtz Society)
Since 2013	Board Member, Molecular and Cellular Cognition Society
Since 2012	Strategy Board Member of the German Center for Neurodegenerative Diseases (DZNE)
Since 2011	Board Member, Hans and Ilse Breuer Foundation
Since 2011	Board Member, Kleekamp Stiftung
Since 2011	Speaker, German Center for Neurodegenerative Diseases (DZNE), Göttingen site (Helmholtz Society)
2009-2018	PI of the DFG funded clinical research group KFO241 (PsyCourse; Pathomechanisms and Signatures in the Longitudinal Course of Psychosis)
2008-2012	Coordinator and PI of the ERA-NEt Neuron project EPITHERAPY (FP7)
Since 2007	Member of the ENI-NET (European Neuroscience Network)

Reviewer for:

Cell, Science, Nature, Science Advances, Nature Neuroscience, Nature Communications, Nature Genetics, EMBO J, EMBO Mol Med, EMBO reports, Neuron, Journal of Clinical Investigation, Molecular Psychiatry, Translational Psychiatry, Jama Psychiatry, Alzheimer's & Dementia, Journal of Alzheimer's disease, Acta Neuropathologica, Molecular Neurodegeneration, European Heart Journal, etc.

Supervision of Researchers in Early Career Phases

Direct supervision of 33 PhD/MD students so far and numerous Master thesis students. Member of 50 + PhD thesis advisory boards. Many former PhD students/postdoctoral researchers obtained leading position in pharmaceutical industry or meanwhile hold university professorships.

Scientific Results

Category A

In this category, please enter (up to 10) articles in peer-reviewed journals, peer-reviewed contributions to conferences or anthology volumes, and book publications

Full list of publications:

<https://www.ncbi.nlm.nih.gov/myncbi/administration.kramer.1/bibliography/public/>

1. Jovasevic V, Wood EM, et. int. **Fischer A**, Radulovic J. [Formation of memory assemblies through the DNA-sensing TLR9 pathway](#). Nature. 2024 Apr;628(8006):145-153. doi: 10.1038/s41586-024-07220-7. Contribution: This collaborative study elucidates how DNA breaks and genome dynamics contribute to cognitive function.
2. Kaurani L, Islam MR, et. Int. **Fischer A**. [Regulation of Zbp1 by miR-99b-5p in microglia controls the development of schizophrenia-like symptoms in mice](#). EMBO J. 2024 Mar 25;. doi: 10.1038/s44318-024-00067-8 (epub ahead of print). Contribution: In this study we provide the largest blood microRNAome dataset from patients suffering from psychosis and identify RNA therapies to address neuroinflammatory processes in brain diseases.
3. Castro-Hernandez, R., Berulava, T., et. Int., **Fischer A**. Conserved reduction of m⁶A RNA modifications during aging and neurodegeneration is linked to changes in synaptic transcripts. Proc Natl Acad Sci U S A. 2023 Feb 28;120(9):e2204933120. DOI: [10.1073/pnas.2204933120](#) Contribution: This study elucidates the role of epitranscriptomic RNA methylation in synapse function and parallels a study from MBExC that addresses, for the first time, the role of RNA methylation in heart failure.
4. Michurina A, Sakib MS, et. int., **Fischer A**. [Postnatal expression of the lysine methyltransferase SETD1B is essential for learning and the regulation of neuron-enriched genes](#). EMBO J. 2022 Jan 4;41(1):e106459. doi: 10.15252/embj.2020106459. Contribution: This study compared the role of different H3K4 methyltransferases in the adult brain, suggesting that SETDB1 is a *bona fide* drug target for neurodevelopmental and adult-onset neurodegenerative disease.
5. Islam MR, Kaurani L, et. int. **Fischer A**. [A microRNA signature that correlates with cognition and is a target against cognitive decline](#). EMBO Mol Med. 2021 Nov 8;13(11):e13659. doi: 10.15252/emmm.202013659. Contribution: This study identifies a non-coding RNA signature

that helps early detection of patients at risk for developing Alzheimer's disease, opening an approach for stratified RNA therapies.

6. Islam MR, Lbik D, Sakib MS, Maximilian Hofmann R, Berulava T, Jiménez Mausbach M, Cha J, Goldberg M, Vakhtang E, Schiffmann C, Zieseniss A, Katschinski DM, Sananbenesi F, Toischer K, **Fischer A**. [Epigenetic gene expression links heart failure to memory impairment](#). *EMBO Mol Med*. 2021 Mar 5;13(3):e11900. doi: 10.15252/emmm.201911900. Contribution: This study shows that heart failure leads to memory impairment via epigenetic changes in neurons.
7. Halder R, Hennion M, et int., **Fischer A***, Bonn S*. (2016) DNA methylation changes in plasticity genes accompany the formation and maintenance of memory. *Nat. Neurosci.* 19, 102-110. (*co-corresponding) doi: [10.1038/nn.4194](#). Contribution: This study was the first multiomics approach to study epigenetic signatures in long-term memory consolidation.
8. Benito E, Urbanke U, et int., Fischer A. (2015) Reinstating transcriptome plasticity and memory function in models for cognitive decline. *J Clin. Invest.* 125, 3572-3584. doi: [10.1172/JCI79942](#) (Open Access). Contribution: This study laid the groundwork to test HDAC inhibitors as epigenetic strategies to treat Alzheimer's disease in clinical trials.
9. Peleg S, Sananbenesi F, et int., Fischer A. (2010) Altered histone H4 lysine 12 acetylation is associated with age-dependent memory impairment in mice. *Science* 328, 753-756. doi: [10.1126/science.1186088](#). Contribution: This study was the first to use next-generation sequencing approaches to study chromatin signatures in the aging brain and help to establish the novel field of Neuroepigenetics
10. Fischer A, Sananbenesi F, Wang X, Dobbin M, Tsai LH. (2007) Recovery of learning and memory is associated with chromatin remodeling. *Nature*. 447, 178-82. doi: [10.1038/nature05772](#). Contribution: corresponding author, This study laid the foundation to suggest that epigenetic strategies, including HDAC inhibitors, could be used to treat Alzheimer's disease

Category B

Patents

1. EP20217509.7 and PCT/EP2021/087806 METHODS AND KITS FOR DETECTING A RISK FOR DEVELOPING NEUROLOGICAL OR NEUROPHYSIOLOGICAL DISORDERS (Andre Fischer, Farahnaz Sananbenesi, Md Rezaul Islam)
2. US 9241916 Cognitive performance with sirtuin activators (David. A. Sinclair, Li-Huei Tsai, Andre Fischer)

Academic Distinctions

2015	ERC Consolidator Grant, European Research Council (ERC)
2010	European Molecular Biology Organization (EMBO) Young Investigator Award
2010	Innovation Award, District of Göttingen Economic Development (GWG)
2010	Amsterdam Young Investigator Award
2009	Dr. Wilmar Schwabe Award, Deutsche Hirnliga e.V.
2009	Alzheimer Research Award, Hans and Ilse Breuer Foundation
2009	Junior Faculty Award of the Alzheimer's disease/Parkinson's Disease Organization
2008	Heinz Maier Leibnitz Award, German Research Foundation (DFG)

2007	European Young Investigator (EURYI) Award, European Science Foundation (predecessor to ERC starting grant)
2004	Feodor Lynen Fellowship, Alexander von Humboldt Foundation

Data protection and consent to the processing of optional data

I expressly consent to the processing of the voluntary (optional) information, including “special categories of personal data”¹ in connection with the DFG’s review and decision-making process regarding my proposal. This also includes forwarding my data to the external reviewers, committee members and, where applicable, foreign partner organisations who are involved in the decision-making process. To the extent that these recipients are located in a third country (outside the European Economic Area), I additionally consent to them being granted access to my data for the above-mentioned purposes, even though a level of data protection comparable to EU law may not be guaranteed. For this reason, compliance with the data protection principles of EU law is not guaranteed in such cases. In this respect, there may be a violation of my fundamental rights and freedoms and resulting damages. This may make it more difficult for me to assert my rights under the General Data Protection Regulation (e.g. information, rectification, erasure, compensation) and, if necessary, to enforce these rights with the help of authorities or in court.

I may **revoke** my consent in whole or in part at any time – with effect for the future, freely and without giving reasons – vis-à-vis the DFG (postmaster@dfg.de). The lawfulness of the processing carried out up to that point remains unaffected. Insofar as I transmit “special categories of personal data” relating to third parties, I confirm that the necessary legitimation under data protection law exists (e.g. based on consent).

I have taken note of the DFG’s Data Protection Notice relating to research funding, which I can access at www.dfg.de/privacy_policy and I will forward it to such persons whose data the DFG processes as a result of being mentioned in this CV.

¹ Special categories of personal data are those “revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and (...) genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person’s sex life or sexual orientation” (Article 9(1) GDPR).