

Frank Heppner

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Department of Neuropathology
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Curriculum vitae

- Since 2019 Executive member of Charité Research Strategy 2030 Team
2018 Acting Science Director Charité-BIH Centrum Therapy and Research CC4, Charité
2017 – 2018 Vice dean for research, Charité – Universitätsmedizin Berlin
2010 – 2016 Spokesperson, Transregional Collaborative Research Center TRR 43, ‘The brain as a target of inflammatory processes’, German Research Foundation (DFG)
Since 2007 Professor (W3) and chair, Department of Neuropathology, Charité, Berlin
2005 Venia legendi (Habilitation) for Pathology/Neuropathology, Universität Zürich, CH
2004 – 2007 Senior consultant and board certified neuropathologist, Institute of Neuropathology, Universität Zürich, CH
2003 Resident in Neuropathology, Institute of Neuropathology, Universität Bonn
2002 – 2003 Resident in Surgical Pathology, Institute of Surgical Pathology, Universität Zürich, CH
1999 – 2002 Postdoctoral fellow and resident, Department of Neuropathology, Universität Zürich, CH
1999 Doctoral degree (MD), Institute of Anatomy, Charité, Berlin
1991 – 1998 Studies in medicine, Universities in Lübeck, Hamburg, Berlin, and London, UK

Research fields

Our group is active in the field of experimental and translational neuropathology and neuroscience with the following major areas:

- Immunological aspects of neurological disorders such as neurodegenerative diseases
- Mechanisms of immunotherapeutic approaches
- Impact of neuroinflammation on systemic metabolism
- Biology of microglia

Activities in the scientific community, honors, awards

- 2018 Member, Leopoldina – German National Academy of Sciences, Section Pathology and Forensic Medicine
Since 2016 Member, Steering Committee Berlin, German Cancer Consortium (DKTK)
Since 2016 Member, Scientific Committee, Berlin Institute of Health (BIH)
2015 – 2018 Neuropathology representative in the Steering Committee of the Federation of German Pathologists (Bundesverbandes Deutscher Pathologen)
2006 Siegenthaler-Habilitation Award, Universität Zürich, CH
2003 Leopoldina Postdoc Scholarship, German National Academy of Sciences
2003 Pfizer Research Award for Neurosciences and Diseases of the Nervous System, CH
Since 2002 Reviewer for Nature, Nature Medicine, Nature Neuroscience, Nature Communications, Journal of Experimental Medicine, Science Translational Medicine, EMBO Journal, Lancet Neurology, Acta Neuropathologica, amongst others.
Since 2001 Member, review board, Federal Ministry of Education and Research (BMBF), German Research Foundation (DFG), amongst others
2001 – 2003 Fellowship, Stammach-Foundation on Alzheimer's disease, CH
1999 – 2001 Long-Term Fellowship, Human Frontier Science Program (HFSP)
1997 – 1998 PhD Fellowship, Boehringer Ingelheim Fonds
1996 – 1997 Member, Graduate College, German Research Foundation (DFG)

Selected publications

- Meinhardt, J., J. Radke, C. Dittmayer, J. Franz, C. Thomas, R. Mothes, M. Laue, J. Schneider, S. Brunink, S. Greuel, M. Lehmann, O. Hassan, T. Aschman, E. Schumann, R. L. Chua, C. Conrad, R. Eils, W. Stenzel, M. Windgassen, L. Rossler, H. H. Goebel, H. R. Gelderblom, H. Martin, A. Nitsche, W. J. Schulz-Schaeffer, S. Hakrrouch, M. S. Winkler, B. Tampe, F. Scheibe, P. Kortvelyessy, D. Reinhold, B. Siegmund, A. A. Kuhl, S. Elezkurtaj, D. Horst, L. Oesterhelweg, M. Tsokos, B. Ingold-Heppner, C. Stadelmann, C. Drosten, V. M. Corman, H. Radbruch, and F. L. Heppner. 2021. 'Olfactory transmucosal SARS-CoV-2 invasion as a port of central nervous system entry in individuals with COVID-19', *Nat Neurosci*, 24: 168-75.
- Houtman, J., K. Freitag, N. Gimber, J. Schmoranzner, F. L. Heppner, and M. Jendrach. 2019. 'Beclin1-driven autophagy modulates the inflammatory response of microglia via NLRP3', *The EMBO Journal*, 38.
- Kalin, S., K. R. Miller, R. E. Kalin, M. Jendrach, C. Witzel, and F. L. Heppner. 2018. 'CNS myeloid cells critically regulate heat hyperalgesia', *J Clin Invest*, 128: 2774-86.
- Prokop, S., K. R. Miller, N. Drost, S. Handrick, V. Mathur, J. Luo, A. Wegner, T. Wyss-Coray, and F. L. Heppner. 2015. 'Impact of peripheral myeloid cells on amyloid-beta pathology in Alzheimer's disease-like mice', *J Exp Med*, 212: 1811-8.
- Vom Berg, J., S. Prokop, K. R. Miller, J. Obst, R. E. Kalin, I. Lopategui-Cabezas, A. Wegner, F. Mair, C. G. Schipke, O. Peters, Y. Winter, B. Becher, and F. L. Heppner. 2012. 'Inhibition of IL-12/IL-23 signaling reduces Alzheimer's disease-like pathology and cognitive decline', *Nat Med*, 18: 1812-9.
- Grathwohl, S. A., R. E. Kalin, T. Bolmont, S. Prokop, G. Winkelmann, S. A. Kaeser, J. Odenthal, R. Radde, T. Eldh, S. Gandy, A. Aguzzi, M. Staufenbiel, P. M. Mathews, H. Wolburg, F. L. Heppner, and M. Jucker. 2009. 'Formation and maintenance of Alzheimer's disease beta-amyloid plaques in the absence of microglia', *Nat Neurosci*, 12: 1361-3.
- Heppner, F. L., M. Greter, D. Marino, J. Falsig, G. Raivich, N. Hovelmeyer, A. Waisman, T. Rulicke, M. Prinz, J. Priller, B. Becher, and A. Aguzzi. 2005. 'Experimental autoimmune encephalomyelitis repressed by microglial paralysis', *Nat Med*, 11: 146-52.
- Greter, M., F. L. Heppner, M. P. Lemos, B. M. Odermatt, N. Goebels, T. Laufer, R. J. Noelle, and B. Becher. 2005. 'Dendritic cells permit immune invasion of the CNS in an animal model of multiple sclerosis', *Nat Med*, 11: 328-34.
- Heppner, F. L., A. D. Christ, M. A. Klein, M. Prinz, M. Fried, J. P. Kraehenbuhl, and A. Aguzzi. 2001. 'Transepthelial prion transport by M cells', *Nat Med*, 7: 976-7.
- Heppner, F. L., C. Musahl, I. Arrighi, M. A. Klein, T. Rulicke, B. Oesch, R. M. Zinkernagel, U. Kalinke, and A. Aguzzi. 2001. 'Prevention of scrapie pathogenesis by transgenic expression of anti-prion protein antibodies', *Science*, 294: 178-82.