

PROFESSOR DR. MED. MANUEL ALEXANDER FRIESE

CURRENT POSITIONS & APPOINTMENTS

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| <i>Since 05/2014</i> | Director of the Institute of Neuroimmunology and Multiple Sclerosis (INIMS), Centre for Molecular Neurobiology Hamburg, University Medical Centre Hamburg-Eppendorf, Germany |
| <i>Since 04/2013</i> | Full (W3) Professor of Neuroimmunology, University Medical Centre Hamburg-Eppendorf, Germany |
| <i>Since 01/2013</i> | Co-head of the Neuroimmunology and Multiple sclerosis outpatient clinic at the Department of Neurology, University Medical Centre Hamburg-Eppendorf, Germany |
| <i>Since 01/2013</i> | Consultant neurologist at the Department of Neurology, University Medical Centre Hamburg-Eppendorf, Germany |

EDUCATION & PROFESSIONAL EXPERIENCE

Research Experience

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| <i>11/2008 – 04/2013</i> | Principal Investigator of an Emmy-Noether Research Group (German Research Foundation) at the Centre for Molecular Neurobiology Hamburg |
| <i>05/2004 – 04/2008</i> | Postdoctoral fellow at the Weatherall Institute of Molecular Medicine, University of Oxford, UK (Professor L. Fugger) |
| <i>07/2001 – 05/2004</i> | Clinical research fellow at the Department of General Neurology and Hertie Institute for Clinical Brain Research, University of Tübingen, Germany (Professor M. Weller) |

Clinical Experience

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| <i>Since 11/2008</i> | Department of Neurology, University Medical-Centre Hamburg-Eppendorf, Germany (Professor C. Gerloff) |
| <i>07/2001 – 05/2004</i> | Department of General Neurology, University of Tübingen, Germany (Professor J. Dichgans) |

MD Thesis

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| <i>11/1998 – 12/2001</i> | Bernhard Nocht Institute for Tropical Medicine in Hamburg, Germany (Professor P.F. Zipfel) "Regulation and expression of the complement proteins factor H and FHL-1/reconectin in physiological and pathological conditions" |
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Education

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| <i>10/1994 – 06/2001</i> | Medical studies at the Universities of Hamburg, University of Oxford and University College London |
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AWARDS & HONOURS

Scholarships

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| <i>11/2008 – 04/2013</i> | Emmy-Noether Fellowship, Deutsche Forschungsgemeinschaft |
| <i>05/2006 – 04/2008</i> | Medical Research Council UK Career Development Fellowship |
| <i>05/2004 – 05/2006</i> | Research Fellowship of the Deutsche Forschungsgemeinschaft |
| <i>11/1997 – 04/2001</i> | Scholar of the German National Scholarship Foundation (Studienstiftung des deutschen Volkes) |

Awards

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| <i>07/2013</i> | Clinical Research Prize (GlaxoSmithKline Foundation Science Awards) |
| <i>11/2010</i> | Oppenheim-Price for Multiple Sclerosis Research (Novartis) |
| <i>11/2008</i> | Helmut-Bauer-Price for Multiple Sclerosis Research (Göttingen) |
| <i>05/2004</i> | Attempto-Prize 2004 for Neuroscience (Tübingen) |
| <i>12/2003</i> | Medac Best Thesis Award for Immunology 2003 (Hamburg) |

PUBLICATION LIST

Original publications (ten most important)

1. Engler JB, Kursawe N, Solano ME, Patas K, Wehrmann S, Heckmann N, Lühder F, Reichardt HM, Arck PC, Gold SM, **Friese MA**. Glucocorticoid receptor in T cells mediates protection from autoimmunity in pregnancy. *Proc Natl Acad Sci U S A*. 2017;114(2):E181-E190.
2. Schattling B, Fazeli W, Engeland B, Liu Y, Lerche H, Isbrandt D, **Friese MA**. Activity of Na(V)1.2 promotes neurodegeneration in an animal model of multiple sclerosis. *JCI Insight*. 2016;1(19):e89810.
3. Ufer F, Vargas P, Engler JB, Tintelnot J, Schattling B, Winkler H, Bauer S, Kursawe N, Willing A, Keminer O, Ohana O, Salinas-Riester G, Pless O, Kuhl D, **Friese MA**. Arc/Arg3.1 governs inflammatory dendritic cell migration from the skin and thereby controls T cell activation. *Sci Immunol*. 2016;1:eaaf8665.
4. Piédavent-Salomon M*, Willing A*, Engler JB, Steinbach K, Bauer S, Eggert B, Ufer F, Kursawe N, Wehrmann S, Jäger J, Reinhardt S, **Friese MA**. Multiple sclerosis associated genetic variants of CD226 impair regulatory T cell function. *Brain*. 2015;138:3263-74. *both authors contributed equally
5. Willing A, Leach OA, Ufer F, Attfield KE, Steinbach K, Kursawe N, Piedavent M, **Friese MA**. CD8+ MAIT cells infiltrate into the CNS and alterations in their blood frequencies correlate with IL-18 serum levels in multiple sclerosis. *Eur J Immunol*. 2014 Oct;44(10):3119-28.
6. Steinbach K, Piedavent M, Bauer S, Neumann JT, **Friese MA**. Neutrophils amplify autoimmune central nervous system infiltrates by maturing local APCs. *J Immunol*. 2013;191(9):4531-9.
7. Schattling B, Steinbach K, Thies E, Kruse M, Menigoz A, Ufer F, Flockerzi V, Brück W, Pongs O, Vennekens R, Kneussel M, Freichel M, Merkler D, **Friese MA**. TRPM4 cation channel mediates axonal and neuronal degeneration in experimental autoimmune encephalomyelitis and multiple sclerosis. *Nat Med*. 2012 Dec;18(12):1805-11.
8. **Friese MA**, Jakobsen KB, Friis L, Etzensperger R, Craner MJ, McMahon RM, Jensen LT, Huygelen V, Jones EY, Bell JI, Fugger L. Opposing effects of HLA class I molecules in tuning autoreactive CD8+ T cells in multiple sclerosis. *Nat Med*. 2008 Nov;14(11):1227-35.
9. Tzartos JS*, **Friese MA***, Craner MJ, Palace J, Newcombe J, Esiri MM, Fugger L. Interleukin-17 production in central nervous system-infiltrating T cells and glial cells is associated with active disease in multiple sclerosis. *Am J Pathol*. 2008 Jan;172(1):146-55. *both authors contributed equally
10. **Friese MA**, Craner MJ, Etzensperger R, Vergo S, Wemmie JA, Welsh MJ, Vincent A, Fugger L. Acid-sensing ion channel-1 contributes to axonal degeneration in autoimmune inflammation of the central nervous system. *Nat Med*. 2007 Dec;13(12):1483-9.

Review publications (five most important)

1. Dendrou CA, Fugger L, **Friese MA**. Immunopathology of multiple sclerosis. *Nat Rev Immunol*. 2015;15:545-58.
2. **Friese MA**, Schattling B, Fugger L. Mechanisms of neurodegeneration and axonal dysfunction in multiple sclerosis. *Nat Rev Neurol*. 2014;10:225-38.
3. Willing A, **Friese MA**. CD8-mediated inflammatory central nervous system disorders. *Curr Opin Neurol*. 2012;25:316-21.
4. **Friese MA**, Fugger L. Pathogenic CD8(+) T cells in multiple sclerosis. *Ann Neurol*. 2009;66:132-41.
5. **Friese MA**, Fugger L. Autoreactive CD8+ T cells in multiple sclerosis: a new target for therapy? *Brain*. 2005;128(Pt 8):1747-63.