

## Curriculum Vitae Reinhard Hohlfeld



### Date and Place of Birth

February 26<sup>th</sup>, 1953, Berlin

### Education

Elementary School and High School in Cologne; Graduation 1971  
Studies of Medicine at the Universities of Cologne (Germany); London (UK); and Homburg/Saar (Germany); MD 1979; Date of approbation: November 29<sup>th</sup>, 1978 (Ärzttekammer Nordrhein-Westfalen)

### Professional Grants and Appointments (past)

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|-----------|---|
| 1979-1981 | Postdoctoral Fellow; Max-Planck Institute for Immunobiology, Freiburg   |
| 1981-1987 | Resident and Research Fellow in Neurology, Department of Neurology, University of Düsseldorf  |
| 1987-1989 | Research Fellow, Department of Neurology and Neuromuscular Research Laboratory, Mayo Clinic, Rochester, Minnesota, USA  |
| 1999-2004 | Member of the Board of Directors (Klinikumsvorstand), University Hospitals of the Ludwig-Maximilians University (LMU), Munich   |
| 2000-2011 | Scientific Coordinator (Sprecher) of the Collaborative Research Centre on Autoimmunity (Sonderforschungsbereich SFB 571, supported by the Deutsche Forschungsgemeinschaft (DFG, German Research Council)) |

### Professional Grants and Appointments (present)

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|------------|---|
| 1990       | Professor of Neurology, LMU Munich;   |
| since 1999 | Director and Chair, Institute for Clinical Neuroimmunology, LMU Munich. Between 1999 and 2008 the Institute was supported by the Hermann and Lilly Schilling Foundation.      |
| since 2012 | Local coordinator and investigator, CRC Transregio 128 “Initiating/effector versus regulatory mechanisms in multiple sclerosis – Progress towards tackling the disease” (DFG) |
| since 2012 | Steering Board Member and Principal Investigator, Munich Cluster for Systems Neurology (SyNergy) (DFG)  |

Awards and Prizes

1971-1978	German National Scholarship (Studienstiftung)
1980	Claude Bernard Prize
1983	Duchenne-Erb Prize (shared with Drs. Wekerle, Ketelsen, Schalke and Kalies)
1983	Heinz-Meier-Leibnitz Prize
1987-1990	Heisenberg Award (granted by the Deutsche Forschungsgemeinschaft)
1991	Sanofi Prize from the German Muscular Dystrophy Association
2004	Sobek Prize for Multiple Sclerosis Research
2006	Käte Hammersen Prize (German MS Society)
2016	Ursula Späth Prize (Amsel Stiftung)

Honorary Lectures and Visiting Professorships

1994	Visiting Professor, University of Ferrara, Italy
1999	Jacobson Visiting Professor, University of Newcastle, United Kingdom
2004	Visiting Professor, University of Ferrara, Italy
2009	ECTRIMS Lecture Award, Düsseldorf, Germany
2010	Newsom Davis Lecture, 10 <sup>th</sup> Int. Congress of Neuroimmunology, Barcelona

Member of Editorial Boards (past and present)

- Brain
- Clinical and Experimental Immunology
- Deutsche Medizinische Wochenschrift
- Expert Opinion on Biological Therapy
- International MS Journal (ended 2011)
- Journal of Neuroimmunology
- Journal of Neurology
- Multiple Sclerosis Journal
- Muscle & Nerve (ended 2006)
- Neurology
- Nervenarzt
- Practical Neurology
- Seminars in Immunopathology (ended 2011)
- Therapeutic Advances in Neurological Disorders

Elected Membership in National Societies and Boards

- German Research Foundation (DFG); Committee „Cellular Neuroscience“ (since 2016)
- German MS Society (DMSG), Head of Scientific Advisory Board (since 2011)
- National Academy of Sciences (Leopoldina)
- Max Planck Society, External Scientific Member
- Center for Advanced Studies, Ludwig Maximilians University of Munich
- Selection Committees for various Research Prizes (Sobek Prize, Oppenheim Prize, Beckurts Prize, Hans-Jörg Weitbrecht Prize for Clinical Neurosciences)

Elected Membership in International Committees

1996-	Advisory Board and Council, International Society for Neuroimmunology (ISNI)
1997-2001	Executive Committee, European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS)
1998-2001	Vice President of ECTRIMS
1997-	Medical and Scientific Board, Multiple Sclerosis International Federation (MSIF)
1999-2003	Executive Committee, European Neurological Society (ENS)
1999-	Honorary Member, Belgian Neurological Society

2003-2009	Research Programs Advisory Committee (RPAC), National Multiple Sclerosis Society, USA
2013-	European Academy of Neurology (EAN), Elected Member of General Assembly
2015-	Member of Scientific Steering Board, Progressive MS Alliance (PMSA)
2015	Vice Chair, International Medical and Scientific Board (IMSB), Multiple Sclerosis International Federation (MSIF)

#### Present Positions

- Professor of Neurology and Clinical Neurosciences, and Director of the Institute for Clinical Neuroimmunology, LMU Munich (INIM; <http://inim.klinikum.uni-muenchen.de/>) (The Institute is associated with the Department of Neuroimmunology at the Max Planck Institute for Neurobiology, Martinsried, and the Department of Neurology, Klinikum Grosshadern, LMU)

#### Research Interests

Autoimmune mechanisms and pathogenesis of neuroimmunological diseases, in particular, Multiple Sclerosis, immunomodulatory treatments for Multiple Sclerosis

#### Clinical Research

Development of therapies for Multiple Sclerosis; therapeutic trials, membership in steering and safety committees.

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## **Selected publications**

Berer K, Gerdes LA, Cekanaviciute E, Jia X, Xiao L, Xia Z, Liu C, Klotz L, Stauffer U, Baranzini SE, Kümpfel T, **Hohlfeld R**, Krishnamoorthy G, Wekerle H. (2017) Gut microbiota from multiple sclerosis patients enables spontaneous autoimmune encephalomyelitis in mice. *Proc Natl Acad Sci U S A*. 114:10719-10724

Brändle SM, Obermeier B, Senel M, Bruder J, Mentele R, Khademi M, Olsson T, Tumani H, Kristoferitsch W, Lottspeich F, Wekerle H, **Hohlfeld R**, Dornmair K. (2016) Distinct oligoclonal band antibodies in multiple sclerosis recognize ubiquitous self-proteins. *Proc Natl Acad Sci U S A*. 113:7864-9

**Hohlfeld R**, Dornmair K, Meinl E, Wekerle H (2016) The search for the target antigens of Multiple Sclerosis, part 1: autoreactive CD4+ T lymphocytes as pathogenic effectors and therapeutic targets. *Lancet Neurology* 2016; 15: 198-209

**Hohlfeld R**, Dornmair K, Meinl E, Wekerle H (2016) The search for the target antigens of Multiple Sclerosis, part 2: CD8+ T cells, B cells and antibodies in the focus of reverse-translational research. *Lancet Neurology* 2016; 15: 317-331

Beltrán E, Obermeier B, Moser M, Coret F, Simó-Castelló M, Boscá I, Pérez-Miralles F, Villar LM, Senel M, Tumani H, **Hohlfeld R**, Casanova B, Dornmair K. (2014) Intrathecal somatic hypermutation of IgM in multiple sclerosis and neuroinflammation. *Brain*. 2014; 137: 2703-2714.

Krumbholz M, Derfuss T, **Hohlfeld R**, Meinl E (2012) B cells and antibodies in multiple sclerosis pathogenesis and therapy. *Nature Rev Neurol* 8: 613-623.

Colombo E, Cordiglieri C, Melli G, Newcombe J, Krumbholz M, Parada LF, Medico E, **Hohlfeld R**, Meinl E, Farina C (2012) Stimulation of the neurotrophin receptor TrkB on astrocytes drives nitric oxide production and neurodegeneration. *J Exp Med* 209: 521-535.

Siewert K, Malotka J, Kawakami N, Wekerle H, **Hohlfeld R**, Dornmair K (2012). Unbiased identification of target antigens of CD8+ T cells with combinatorial libraries coding for short peptides. *Nat Med* 18: 824-8

Kappos L, Radue EW, O'Connor P, Polman C, **Hohlfeld R**, Calabresi P, Selmaj K, Agoropoulou C, Leyk M, Zhang-Auberson L, Burtin P; FREEDOMS Study Group (2010). A placebo-controlled trial of oral fingolimod in relapsing multiple sclerosis. *N Engl J Med* 362: 387-401

**Hohlfeld R** (2010). "Gimme five": future challenges in multiple sclerosis. ECTRIMS Lecture 2009. *Multiple Sclerosis* 16: 3-14

Obermeier B, Mentele R, Malotka J, Kellermann J, Kümpfel T, Wekerle H, Lottspeich F, **Hohlfeld R**, Dornmair K. (2008) Matching of oligoclonal immunoglobulin transcriptomes and proteomes of cerebrospinal fluid in multiple sclerosis. *Nat Med* 14: 688-693

Mathey EK, Derfuss T, Storch MK, Williams KR, Hales K, Woolley DR, Al-Hayani A, Davies SN, Rasband MN, Olsson T, Moldenhauer A, Velhin S, **Hohlfeld R**, Meinl E, Linington C (2007) Neurofascin as a novel target for autoantibody-mediated axonal injury. *J Exp Med* 204:2363-2372.

Junker A, Ivanidze J, Malotka J, Eiglmeier I, Lassmann H, Wekerle H, Meinl E, **Hohlfeld R**, Dornmair K. (2007) Multiple sclerosis: T-cell receptor expression in distinct brain regions. *Brain*. 130: 2789-99.

Meinl E, Krumbholz M, **Hohlfeld R** (2006) B lineage cells in the inflammatory central nervous system environment: migration, maintenance, local antibody production, and therapeutic modulation. *Annals of Neurology*, 59: 880-892

Krumbholz M, Theil D, Derfuss T, Rosenwald A, Schrader F, Monoranu C-M, Kalled SL, Hess DM, Serafini B, Aloisi F, Wekerle H, **Hohlfeld R**, Meinl E. (2005) BAFF is produced by astrocytes and up-regulated in multiple sclerosis lesions and primary central nervous system lymphoma. *J Exp Med* 201: 195-200

Skulina C, Schmidt S, Dornmair K, Babbe H, Roers A, Rajewsky K, Wekerle H, **Hohlfeld R**, Goebels N. Multiple sclerosis: brain-infiltrating CD8+ T cells persist as clonal expansions in the cerebrospinal fluid and blood. (2004) *Proc Natl Acad Sci U S A*.101: 2428-33

Kerschensteiner M, Gallmeier E, Behrens L, Vargas Leal V, Misgeld T, Klinkert WEF, Kolbeck R, Hoppe E, Oropeza-Wekerle RL, Bartke I, Stadelmann C, Lassmann H, Wekerle H, **Hohlfeld R**. (1999) Activated human T cells, B cells, and monocytes produce brain-derived neurotrophic factor in vitro and in inflammatory brain lesions: A neuroprotective role of inflammation? *J Exp Med* 189: 865-870 (1999)

**Hohlfeld R**, Engel AG, Li K, Harper MC. (1991) Polymyositis mediated by T lymphocytes that express the gamma-delta receptor. *N Engl J Med* 324: 877-881

**Hohlfeld R**, Toyka KV, Heining K, Grosse-Wilde H, Kalies I. (1984) Autoimmune human T lymphocytes specific for acetylcholine receptor. *Nature* 310, 244-246 (1984)