

## Seija Lehnardt

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### Curriculum vitae

since 2009 Professor (W1), Molecular Medicine, Charité  
2008 Habilitation, Experimental Neurology  
since 2006 Resident, Department of Neurology, Charité  
2004 – 2005 Resident, Department of Neuropediatrics, Charité  
2001 – 2003 Postdoctoral fellow (Advisor: Prof. T. Vartanian), Department of Neurology, Harvard Institutes of Medicine and Program in Neuroscience, Harvard Medical School, Boston  
2001 Dissertation  
1997 – 2000 PhD thesis, Center for Anatomy, Charité  
1995 – 2004 Studies in Medicine, Charité

### Research fields

Our group is active in the field of neuroimmunology and neurodegeneration with the following major areas:

- Cellular and molecular mechanisms of immune cell-mediated neuronal injury
- Cellular and molecular mechanisms of cell-autonomous neuronal injury
- Cellular and molecular mechanisms of CNS infections
- Innate immune receptors in CNS development

### Activities in the scientific community, honors, awards

since 2008 Faculty, Berlin Graduate Research School for Infectious Diseases and Immunology, Berlin  
2008 – 2010 Faculty of the Research Training Group (GRK) 1258 “Neuroinflammation”, Berlin  
2005 – 2007 Scholarship Rahel Hirsch for Habilitation, Charité  
2004 Scholarship for Forschungs-AIP, Charité  
1998 – 2004 Scholarship, Studienstiftung des deutschen Volkes, Bonn

## Selected publications

Siffrin, V, Radbruch, H, Glumm, R, Niesner, R, Paterka, M, Herz, J, Leuenberger, T, Lehmann, SM, Luenstedt, S, Rinnenthal, JL, Laube, G, Luche, H, Lehnardt, S, Fehling, HJ, Griesbeck, O and Zipp, F. In vivo imaging of partially reversible th17 cell-induced neuronal dysfunction in the course of encephalomyelitis. *Immunity*. 2010; 33, 424-36.

Lehnardt, S. Innate immunity and neuroinflammation in the CNS: the role of microglia in Toll-like receptor-mediated neuronal injury. *Glia*. 2010; 58, 253-63.

Markovic, DS, Vinnakota, K, Chirasani, S, Synowitz, M, Raguet, H, Stock, K, Sliwa, M, Lehmann, S, Kalin, R, van Rooijen, N, Holmbeck, K, Heppner, FL, Kiwit, J, Matyash, V, Lehnardt, S, Kaminska, B, Glass, R and Kettenmann, H. Gliomas induce and exploit microglial MT1-MMP expression for tumor expansion. *Proc Natl Acad Sci U S A*. 2009; 106, 12530-5.

Lehnardt, S, Schott, E, Trimbuch, T, Laubisch, D, Krueger, C, Wulczyn, G, Nitsch, R and Weber, JR. A vicious cycle involving release of heat shock protein 60 from injured cells and activation of toll-like receptor 4 mediates neurodegeneration in the CNS. *J Neurosci*. 2008; 28, 2320-31.

Lehnardt, S, Wennekamp, J, Freyer, D, Liedtke, C, Krueger, C, Nitsch, R, Bechmann, I, Weber, JR and Henneke, P. TLR2 and caspase-8 are essential for group B Streptococcus-induced apoptosis in microglia. *J Immunol*. 2007; 179, 6134-43.

Lehnardt, S, Lehmann, S, Kaul, D, Tschimmel, K, Hoffmann, O, Cho, S, Krueger, C, Nitsch, R, Meisel, A and Weber, JR. Toll-like receptor 2 mediates CNS injury in focal cerebral ischemia. *J Neuroimmunol*. 2007; 190, 28-33.

Hoffmann, O, Braun, JS, Becker, D, Halle, A, Freyer, D, Dagand, E, Lehnardt, S and Weber, JR. TLR2 mediates neuroinflammation and neuronal damage. *J Immunol*. 2007; 178, 6476-81.

Lehnardt, S, Henneke, P, Lien, E, Kasper, DL, Volpe, JJ, Bechmann, I, Nitsch, R, Weber, JR, Golenbock, DT and Vartanian, T. A mechanism for neurodegeneration induced by group B streptococci through activation of the TLR2/MyD88 pathway in microglia. *J Immunol*. 2006; 177, 583-92.

Lehnardt, S, Massillon, L, Follett, P, Jensen, FE, Ratan, R, Rosenberg, PA, Volpe, JJ and Vartanian, T. Activation of innate immunity in the CNS triggers neurodegeneration through a Toll-like receptor 4-dependent pathway. *Proc Natl Acad Sci U S A*. 2003; 100, 8514-9.

Lehnardt, S, Lachance, C, Patrizi, S, Lefebvre, S, Follett, PL, Jensen, FE, Rosenberg, PA, Volpe, JJ and Vartanian, T. The toll-like receptor TLR4 is necessary for lipopolysaccharide-induced oligodendrocyte injury in the CNS. *J Neurosci*. 2002; 22, 2478-86.