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(*25.10.1971)

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Education and Scientific Career

2010	„Um-Habilitation“/ <i>venia legendi</i> for Innere Medizin, Charité
2010	Certificate of the German Society Gastroenterology for Inflammatory Bowel Disease
2009	Board Certificate Gastroenterology
2009	Chairperson of the German Inflammatory Bowel Disease Working Group
Since 2008	Scientific Secretary of SFB 633
Since 2007	Attending Medical Department I, Charité, CBF (Prof. Dr. M. Zeitz)
2007	Board Certificate Internal Medicine
2006	„Habilitation“/ <i>venia legendi</i> for Experimental Medicine, Charité
2002 – 2007	Residency, Medical Department I, Charité, CBF (Prof. Dr. M. Zeitz)
2000 – 2002	Postdoctoral Fellow Department of Infectious Diseases, University of Colorado (Prof. C. A. Dinarello)
1998 – 2000	Residency, Department of Medicine, Ludwig-Maximilians-University, Munich (Prof. Dr. Dr. h.c. P. Scriba)
1995 – 1998	Medical thesis on anti-inflammatory strategies mediated by IL-10, Department of Medicine/ Clinical Pharmacology, Ludwig-Maximilians-University, Munich (Prof. Dr. S. Endres)
1992 – 1998	Study of Medicine at the Ludwig-Maximilians-University, Munich and Harvard Medical School, Boston

Awards and Scholarships

2006	Rising Star in Gastroenterology, ASNMGE
2002 – 2007	Emmy-Noether Young investigator group
2001	Young Investigator Award, International Cytokine Society
2000 - 2002	Postdoctoral Fellowship by the Deutsche Forschungsgemeinschaft
1997	Award from the „Harvard-Munich-Alliance“ for Medical Education

Scientific Focus

Major interest of our group is to translate clinical findings of patients with inflammatory bowel diseases to the bench and *vice versa* with the ultimate goal to contribute to the understanding of the disease pathways as well as to identify possible novel therapeutic targets. Two main directions build the current focus of our group.

First, the biological and clinical significance of „creeping fat“, a pathognomic finding in patients with Crohn's disease is not understood. The mesenteric fat tissue, initially considered as energy storage, not only harbors numerous immune cells but more important strongly regulates the immune response. Thus the fat tissue builds the source of adipokines, chemokines and cytokines and more important adipocytes and preadipocytes themselves can be considered as cells of the innate immune system. The current work dissects the immune response in the mesenteric fat tissue adjacent to the inflamed intestine.

Second, chronic inflammation drives tumorigenesis in man and in mice. Modification of the state of histone and non-histone acetylation can regulate tumorigenesis as well as inflammation. Knockout mice as well as *in vitro* knockdown strategies serve to define the role of single histone deacetylases in models of intestinal inflammation.

10 most important Publications

1. **B. Siegmund**, H. A. Lehr, G. Fantuzzi, C. A. Dinarello. Interleukin-1 β -converting enzyme (caspase-1) in intestinal inflammation. *PNAS* 98:13249-54, 2001
2. **B. Siegmund**, K. C. Lear-Kaul, R. Faggioni, G. Fantuzzi. Leptin deficiency, not obesity, protects mice from Con A-induced hepatitis. *Eur J Immunol* 32:552-60, 2002
3. **B. Siegmund**, H. A. Lehr, G. Fantuzzi. Leptin: a pivotal role in intestinal inflammation. *Gastroenterology* 122:2011-2025, 2002
4. **B. Siegmund**, J. A. Senello, J. Jones-Carson, F. Gamboni-Robertson, H. A. Lehr, A. Batra, I. Fedke, M. Zeitz, G. Fantuzzi. Leptin receptor on T lymphocytes modulates chronic intestinal inflammation in mice. *Gut* 53:965-72, 2004
5. R. Glauben, A. Batra, I. Fedke, M. Zeitz, H. A. Lehr, F. Leoni, P. Mascagni, G. Fantuzzi, C. A. Dinarello, **B. Siegmund**. Histone hyperacetylation is associated with amelioration of experimental colitis in mice. *J Immunol* 176:5015-22, 2006
6. Batra A, Pietsch J, Fedke I, Glauben R, Okur B, Stroh T, Zeitz M, **Siegmund B**. Leptin-dependent TLR expression and responsiveness in preadipocytes and adipocytes. *Am J Pathol* (2007) 170:890-5.
7. Glauben R, Batra A, Stroh T, Erben U, Fedke I, Lehr HA, Leoni F, Mascagni P, Dinarello CA, Zeitz M, **Siegmund B**. Histone deacetylases: novel targets for prevention of colitis-associated cancer in mice. *Gut* (2008) 57:613-22.
8. Stroh T, Batra A, Glauben R, Fedke I, Erben U, Kroesen A, Heimesaat MM, Bereswill S, Girardin S, Zeitz M, **Siegmund B**. Nucleotide oligomerization domains 1 and 2: regulation of expression and function in preadipocytes. *J Immunol* (2008) 181:3620-7.
9. Batra A, Okur B, Glauben R, Erben U, Ihbe J, Stroh T, Fedke I, Chang HD, Zeitz M, **Siegmund B**. Leptin: A critical regulator of CD4⁺ T-cell polarization in vitro and in vivo. *Endocrinology* (2010) 151:56-62.
10. Stroh T, Erben U, Kühl AA, Zeitz M, **Siegmund B**. Combined pulse electroporation – a novel strategy for highly efficient transfection of human and mouse cells. *PLoS One* (2010) 5(3):e9488.