# Univ.-Prof. Dr. med. Britta Siegmund

(*25.10.1971)

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**Education and Scientific Career**

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| 2012 | W2 Heisenbergprofessorship „Translational Gastroenterology – inflammatory bowel disease“ |
| 2010 | Venia legendi 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“/ venia legendi 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**

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| 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 themseives 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 models of intestinal inflammation.

**10 most important Publications**


1. **B. Siegmund**, H. A. Lehr, G. Fantuzzi, C. A. Dinarello. Interleukin-1□-converting enzyme (caspase-1) in intestinal inflammation. PNAS 98:13249-54, 2001
2. **B. Siegmund**, H. A. Lehr, G. Fantuzzi. Leptin: a pivotal role in intestinal inflammation. Gastroenterology 122:2011-2025, 2002
3. **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
4. 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
5. Batra A, Pietsch J, Fedke I, Glauben R, Okur B, Stroh T, Zeitz M, **Siegmund B.** Leptin-dependent TLR expression and resposiveness in preadipocytes and adipocytes. *Am J Pathol (*2007) 170:890-5.
6. 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.
7. Stroh T, Batra A, Glauben R, Fedke I, Erben U, Kroesen A, Heimesaat MM, Bereswill S, Giradin S, Zeitz M, **Siegmund B.** Nucleotide oligomerization domains 1 and 2: regulation of expression and function in preadipocytes. *J Immunol* (2008) 181:3620-7.
8. 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.
9. 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.
10. Kredel LI, Batra A, Stroh T., Kühl AA, Zeitz M, Erben U**, Siegmund B**. Adipokines from local cells shape the macrophage compartment of the creeping fat in Crohn's disease. *Gut* (2012) *in press*