

Birgit Sawitzki , M.Sc., PhD
(*1970)



Current Appointment

Group leader (“transplant tolerance”)
Institute of Medical Immunology
Charité – University Medicine Berlin
Monbijoustr. 2a
10117 Berlin, Germany
Phone: +49-30-450524136, Fax: +49-30-450524907
Email: birgit.sawitzki@charite.de

Education

1995 – 1999 Ph.D. Institute of Medical Immunology, Charité – University Medicine Berlin
exact date of PhD award: 21.09.1999
1989 – 1994 Humboldt-University, Biochemistry, Degree: Dipl. Biochemikerin

Professional career

since 2003 Group leader “transplant tolerance”, Institute of Medical Immunology, Charité – University Medicine Berlin
2001-2003 Postdoc, Wellcome Trust “Travelling Research Fellowship”, Nuffield Department of Surgery, John Radcliffe Hospital, University of Oxford
1999-2001 Postdoctoral Position, Institute of Medical Immunology, Charité – University Medicine Berlin
1988–1989 VEB Berlin-Chemie, professional training as a Labassistent

Awards

1998 Young Investigator Award, 17th Annual Meeting of the American Transplantation Society
1998 Zondek Prize, 9th European Students Conference

Membership

- German Society of Immunology, DGFI
- European Society of Transplantation, ESOT
- The Transplantation Society

Research interests

- Main research focus - Transplant Immunology
- Establishment of more clinically relevant transplant models
- Post transplant monitoring program for patients receiving tolerance inducing therapies and conventional immunosuppressive drug
- Mechanisms of CyA mediated tolerance abrogation
- *In vitro* generation and characterisation of allo-specific regulatory T cells
- Generation and characterisation of tolerogenic dendritic cells
- Functional characterisation of tolerance associated genes

Participation in research projects

Since my time as a PhD student I have been the Principal Investigator of many different research projects (see also funding ID). I have worked together with many collaborators in international and national projects including EU projects, Immune Tolerance Network

(USA), NIH projects (USA), ROTRF projects and projects funded by the German Research Foundation.

Scientific collaboration

- Prof. Kathryn Wood, Nuffield Department of Surgery, University of Oxford, UK
- Prof. J.W. Kupiec-Weglinski, , UCLA, USA
- Dipl. Biol. A. Siefert and Dr. M. Lehmann, Institute of Medical Biochemistry and Molecular Biology, University of Rostock, Germany
- Dr. Th. Ritter, Regenerative Medicine Institute REMEDI, NUI Galway, Ireland
- Dr. A. Pascher, Department of Visceral- and Transplantation Surgery, Charité University Medicine, Berlin, Germany
- Dr. Ch. Brandt, Institute of Cell Biology and Neurobiology, Charité University Medicine, Berlin, Germany
- Dr. R. Sabat, Interdisciplinary Group of Molecular Immunopathology, Charité University Medicine, Berlin, Germany
- Prof. A. Meisel, Department of Neurology, Charité University Medicine, Berlin, Germany
- Dr. S. Waizies and Prof. F. Zipp, Institute of Neuroimmunology, Charité University Medicine, Berlin, Germany
- Prof. U. Pleyer, Department of Ophthalmology, Charité University Medicine, Berlin, Germany
- Dr. R. Baumgrass, German Research Center of Rheumatology, Berlin, Germany
- Prof. J. Denner, Robert Koch Institute, Berlin, Germany

Publications

1. Gajanayake T, **Sawitzki B**, Matozan K, Korchagina EY, Lehmann M, Volk HD, Rieben R. Dextran Sulfate Facilitates Anti-CD4 mAb-Induced Long-Term Rat Cardiac Allograft Survival After Prolonged Cold Ischemia. *Am J Transplant*. 2008 Apr 29. Epub ahead of print
2. **Sawitzki B**, Reinke P, Volk HD, Wood K, Turka LA. Autoimmunity and transplantation: a meeting at the crossroads in Berlin. *Nat Immunol*. 2008 May;9(5):447-9.
3. Volk HD, **Sawitzki B**, Kern F, Höflich C, Sabat R, Reinke P. Immunomodulatory therapies: challenges of individualized therapy strategies. *Ernst Schering Found Symp Proc*. 2006;4:59-68. Review.
4. Kuttler B, Wanka H, Klötting N, Gerstmayer B, Volk HD, **Sawitzki B**, Ritter T. Ex vivo gene transfer of viral interleukin-10 to BB rat islets: no protection after transplantation to diabetic BB rats. *J Cell Mol Med*. 2007 Jul-Aug;11(4):868-80.
5. Wood KJ, Feng G, Wei B, **Sawitzki B**, Bushell AR. Interferon gamma: friend or foe? *Transplantation*. 2007 Jul 15;84(1 Suppl):S4-5.
6. **Sawitzki B**, Bushell A, Steger U, Jones N, Risch K, Siefert A, Lehmann M, Schmitt-Knosalla I, Vogt K, Gebuhr I, Wood K, Volk HD. Identification of gene markers for the prediction of allograft rejection or permanent acceptance. *Am J Transplant*. 2007 May;7(5):1091-102.

7. Mutlu L, Brandt C, Kwidzinski E, **Sawitzki B**, Gimsa U, Mahlo J, Aktas O, Nitsch R, van Zwam M, Laman JD, Bechmann I. Tolerogenic effect of fiber tract injury: reduced EAE severity following entorhinal cortex lesion. *Exp Brain Res*. 2007 Apr;178(4):542-53. Epub 2006 Nov 8.
8. Pascher A, Proesch S, Pratschke J, Reutzel-Selke A, **Sawitzki B**, Lehmann M, Tullius SG, Neuhaus P, Volk HD, Reinke P. Rat cytomegalovirus infection interferes with anti-CD4 mAb-(RIB 5/2) mediated tolerance and induces chronic allograft damage. *Am J Transplant*. 2006 Sep;6(9):2035-45.
9. Wood KJ, **Sawitzki B**. Interferon gamma: a crucial role in the function of induced regulatory T cells in vivo. *Trends Immunol*. 2006 Apr;27(4):183-7. Epub 2006 Mar 9.
10. Sollwedel A, Bertoja AZ, Zenclussen ML, Gerlof K, Lisewski U, Wafula P, **Sawitzki B**, Woiciechowsky C, Volk HD, Zenclussen AC. Protection from abortion by heme oxygenase-1 up-regulation is associated with increased levels of Bag-1 and neuropilin-1 at the fetal-maternal interface. *J Immunol*. 2005 Oct 15;175(8):4875-85.
11. **Sawitzki B**, Kingsley CI, Oliveira V, Karim M, Herber M, Wood KJ. IFN-gamma production by alloantigen-reactive regulatory T cells is important for their regulatory function in vivo. *J Exp Med*. 2005 Jun 20;201(12):1925-35.
12. Brandt C, Yang J, Schmitt-Knosalla I, Siepert A, Hammer MH, Vogt K, **Sawitzki B**, Lehmann M, Volk HD, Ritter T. Allo-specific T-cells encoding for viral IL-10 exert strong immunomodulatory effects in vitro but fail to prevent graft rejection. *Am J Transplant*. 2005 Feb;5(2):268-81.
13. **Sawitzki B**, Kieselbach B, Fisser M, Meisel C, Vogt K, Gaestel M, Lehmann M, Risch K, Grütz G, Volk HD. IFN-gamma regulation in anti-CD4 antibody-induced T cell unresponsiveness. *J Am Soc Nephrol*. 2004 Mar;15(3):695-703.
14. Melk A, Schmidt BM, Takeuchi O, **Sawitzki B**, Rayner DC, Halloran PF. Expression of p16INK4a and other cell cycle regulator and senescence associated genes in aging human kidney. *Kidney Int*. 2004 Feb;65(2):510-20.
15. Karim M, Kingsley CI, Bushell AR, **Sawitzki B**, Wood KJ. Alloantigen-induced CD25+CD4+ regulatory T cells can develop in vivo from CD25-CD4+ precursors in a thymus-independent process. *J Immunol*. 2004 Jan 15;172(2):923-8.
16. Steger U, **Sawitzki B**, Gassel AM, Gassel HJ, Wood KJ. Impact of hepatic rearterialization on reperfusion injury and outcome after mouse liver transplantation. *Transplantation*. 2003 Jul 27;76(2):327-32.
17. Yang J, Reutzel-Selke A, Steier C, Jurisch A, Tullius SG, **Sawitzki B**, Kolls J, Volk HD, Ritter T. Targeting of macrophage activity by adenovirus-mediated intragraft overexpression of TNFRp55-Ig, IL-12p40, and vIL-10 ameliorates adenovirus-mediated chronic graft injury, whereas stimulation of macrophages by overexpression of IFN-gamma accelerates chronic graft injury in a rat renal allograft model. *J Am Soc Nephrol*. 2003 Jan;14(1):214-25.

18. Ruscher K, Freyer D, Karsch M, Isaev N, Megow D, **Sawitzki B**, Priller J, Dirnagl U, Meisel A. Erythropoietin is a paracrine mediator of ischemic tolerance in the brain: evidence from an in vitro model. *J Neurosci*. 2002 Dec 1;22(23):10291-301.
19. Simon AK, Gallimore A, Jones E, **Sawitzki B**, Cerundolo V, Screaton GR. Fas ligand breaks tolerance to self-antigens and induces tumor immunity mediated by antibodies. *Cancer Cell*. 2002 Oct;2(4):315-22.
20. Tullius SG, Nieminen-Kelhä M, Buelow R, Reutzel-Selke A, Martins PN, Pratschke J, Bachmann U, Lehmann M, Southard D, Iyer S, Schmidbauer G, **Sawitzki B**, Reinke P, Neuhaus P, Volk HD. Inhibition of ischemia/reperfusion injury and chronic graft deterioration by a single-donor treatment with cobalt-protoporphyrin for the induction of heme oxygenase-1. *Transplantation*. 2002 Sep 15;74(5):591-8.
21. **Sawitzki B**, Amersi F, Ritter T, Fisser M, Shen XD, Ke B, Busuttil R, Volk HD, Kupiec-Weglinski JW. Upregulation of Bag-1 by ex vivo gene transfer protects rat livers from ischemia/reperfusion injury. *Hum Gene Ther*. 2002 Aug 10;13(12):1495-504.
22. **Sawitzki B**, Lehmann M, Vogt K, Seifert M, Risch K, Brock J, Kupiec-Weglinski JW, Volk HD. Bag-1 up-regulation in anti-CD4 mAb-treated allo-activated T cell confers resistance to activation-induced cell death (AICD). *Transpl Immunol*. 2002 May;9(2-4):83-91.
23. **Sawitzki B**, Lehmann M, Vogt K, Risch K, Brock J, Kupiec-Weglinski JW, Volk HD. Bag-1 up-regulation in anti-CD4 mAb treated allo-activated T cells confers resistance to apoptosis. *Eur J Immunol*. 2002 Mar;32(3):800-9.
24. Nickel P, Lacha J, Ode-Hakim S, **Sawitzki B**, Babel N, Frei U, Volk HD, Reinke P. Cytotoxic effector molecule gene expression in acute renal allograft rejection: correlation with clinical outcome; histopathology and function of the allograft. *Transplantation*. 2001 Sep 27;72(6):1158-60.
25. **Sawitzki B**, Lehmann M, Ritter T, Graser E, Kupiec-Weglinski JW, Volk HD. Regulatory tolerance-mediating T cells in transplantation tolerance. *Transplant Proc*. 2001 May;33(3):2092-3.
26. Ke B, Coito AJ, Kato H, Zhai Y, Wang T, **Sawitzki B**, Seu P, Busuttil RW, Kupiec-Weglinski JW. Fas ligand gene transfer prolongs rat renal allograft survival and down-regulates anti-apoptotic Bag-1 in parallel with enhanced Th2-type cytokine expression. *Transplantation*. 2000 Apr 27;69(8):1690-4.
27. Gachet Y, Lee M, **Sawitzki B**, Tournier S, Poulton T, Bommer UA. Intracellular colocalisation of the translationally controlled protein P23 with cytoskeletal structures. *Biochem Soc Trans*. 1997 May;25(2):269S.