

Curriculum Vitae- Thomas Decker

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University Studies & Professional Experience

1986 PhD in Biology, Albert- Ludwigs University of Freiburg, Germany; 1987-1990 Postdoctoral training at the Rockefeller University, New York, USA; 1990-1993 Assistant professor and group leader, Fraunhofer Institute, Hannover, Germany; 1992-93 Visiting professor at the Karolinska Institute, Stockholm; since 2003 group leader and Professor of Immunobiology, University of Vienna, (tenure since January 2002); 2001-2009 Chairman Department of Microbiology and Genetics

Honors and Awards:

1987 Research fellowship, Deutsche Forschungsgemeinschaft; 1987 EMBO long term fellowship (renounced) 1991 EMBO short term fellowship; 1992 Karolinska institute visiting professor fellowship; 1996, European Interferon award

Experience in Management & Organization & PhD student supervision

Congress organization: Member of the organization committee for the annual meeting of the International Cytokine Society (ICS) and the Society for Cytokine and Interferon Research (ISICR); Vienna 2006; member of the scientific organizing committee Lisbon 2009; Organizer of a Keystone meeting on Jak-Stat signal transduction; Steamboat Springs, 2007. Organizer of a FEBS special meeting 'Jak-Stat signalling in health and disease', 2010, Member scientific organizing committee Semmering conferences on vaccine development (2005, 2007, 2009, 2011).

Member of the advisory body of the Austrian Society of Allergology and Immunology

Editor: Associate editor JCI (2002-2009), editorial board member J. Immunol. (since 2010), Mol Cell Biol. (starting 2011); several special Journal issues

Consultant: Boehringer Ingelheim (1994-2003), Sandoz GmbH (2004); Intercell (2004-present).

Student supervision: 19 PhD thesis, 27 masters theses

Summary of Scientific Publication Record

>100, mainly peer-reviewed but including review articles in journals and book chapters.

Main Research Interests

Our recent studies show how infection with *Listeria monocytogenes* leads to the production of type I Interferons in macrophages and DC and how the cytokines influence antibacterial innate immunity. In keeping with this interest we have described mechanisms of gene regulation by the Jak-Stat pathway and by a cooperation of Jak-Stat and NFκB pathways in *Listeria*-infected macrophages. In addition we are currently studying interactions of *Listeria* with the intestinal mucosa and spreading of the bacteria subsequent to crossing the intestinal barrier.

Current funding sources:

Source	Short title/topic	Duration	Amount
FWF SFB28	Jak-Stat signal transduction in infection	1/2010-1/2013	369 k€
FWF P 20522	Type I IFN in antibacterial immunity	1/2008-1/2011	381 k€
FWF	doctorate school: cell signaling	1/2009-1/2012	150 k€
GENAU	Inflammbiota-relationship gut microbiome -immune status	5/2009-5/2012	240.k€

List of Publications (since 2006)

1. Soulat, D., Bauch, A., Stockinger, S., Superti-Furga, G. and T. Decker. 2006. Cytoplasmic *Listeria monocytogenes* stimulates IFN- β synthesis without requiring the adapter protein MAVS. **FEBS Letters**, 580 : 2341-2346.
2. Zupkovitz G, Tischler J, Posch M, Sadzak I, Ramsauer K, Egger G, Grausenburger R, Schweifer N, Chiocca S, Decker T, Seiser C. 2006. Negative and positive regulation of gene expression by mouse histone deacetylase 1. **Mol. Cell. Biol.**, 26 : 7913-7928.
3. Ramsauer, K., Farlik, M., Zupkovitz, G., Seiser, C., Kröger, A., Hauser, H.-J. and Thomas Decker. 2007. Distinct modes of action applied by transcription factors STAT1 and IRF1 to initiate transcription of the IFN- γ -inducible *gfp2* gene. **Proc. Natl. Acad. Sci.**, 104: 2849-2854.
4. Schindler, C., Levy, D.E. and T. Decker. 2007. JAK-STAT Signaling: from Interferons to Cytokines. **J. Biol. Chem.** 282 : 20059.
5. Werts, C., Le Bourhis, L., Liu, J., Magalhaes, J.G., Fritz, J.H., Stockinger, S., Decker, T., Philpott, D., Ma, X. And S. E. Girardin. 2007. Nod1 and Nod2 induce CCL5/RANTES through the NF κ B pathway. **Eur. J. Immunol.**, 37:2499-508.
6. Schroder, K., Spille, M., Pilz, A., Lattin, J., Bode, K.A., Irvine, K.M., Burrows, A.D., Ravasi, T., Weighardt, H., Stacey, K.J., Decker, T., Hume, D.A., Dalpke, A.H. and M. J. Sweet. 2007. Differential effects of CpG DNA on IFN α induction and STAT1 activation in murine macrophages versus dendritic cells: alternatively activated STAT1 negatively regulates toll-like receptor signalling in macrophages. **J. Immunol.** 179:3495-503.
7. Reutterer, B., Stockinger, S., Pilz, A., Soulat, S., Kastner, R., Westermayer, S., Rüllicke, T., Müller, M. and T. Decker. 2008. Type I IFN are host modulators of strain-specific *Listeria monocytogenes* virulence. **Cell. Microbiol.** 10:1116-1129.
8. Huber M, Steinwald V, Guralnik A, Brüstle A, Kleemann P, Rosenplänter C, Decker T and M. Lohoff. 2008. IL-27 inhibits the development of regulatory T cells via STAT3. **Int Immunol.** 20 :223-34.
9. Zwaferink, H., Stockinger, S., Hazemi, P., Lemmens-Gruber, R. and T. Decker. 2008. IFN β increases Listeriolysin O-induced membrane permeabilisation and death of macrophages. **J. Immunol.**, 180 : 4116-4123..
10. Zwaferink, H., Stockinger, S., Reipert, S. and T. Decker. 2008. Stimulation of inducible nitric oxide synthase expression by interferon beta increases necrotic death of macrophages upon *Listeria monocytogenes* infection. **Infection and Immunity**, 76 :1649-1656.
11. von Gabain A, Nagy E, Decker T. 2008. Novel paradigms in vaccine development: from small pox eradication to therapeutic vaccines. **Biol Chem.** 389 : 455-456.
12. Soulat, D., Bürckstümmer, T., Westermayer, S., Goncalves, A., Bauch, A., Preradovic, A., Hantschel, O., Bennett, K.L., Decker, T. and G. Superti-Furga. 2008. The DEAD-box helicase DDX3X is a critical component of the TANK-binding kinase 1-dependent innate immune response. **EMBO J.** 27:2135-2146.
13. Stockinger, S. and T. Decker 2008. New functions of type I interferons revealed by infection studies with *Listeria monocytogenes*. **Immunobiology**, 213 : 889-897.
14. Stockinger, S. and T. Decker. 2008. STATs and infection. In 'Jak-Stat pathway in disease', S. Stephanou, ed. Landes Bioscience, 1-15. Book chapter

15. Grundtner, P., Gruber, S., Murray, S., Vermeire, S., Rutgeert, P., Decker, T., Lakatos, P.L. and Christoph Gasche. 2008. The *IL10R1* S138G Loss-of-Function Allele and Ulcerative Colitis. **Genes and Immunity**, 10 :84-92.
16. Aly, S., Mages, J., Reiling, N., Kalinke, U., Decker, T., Lang, R. and S. Ehlers. 2009. Mycobacteria-induced granuloma necrosis depends on IRF-1. **J. Cell. Mol. Med.** 13:2069-82.
17. Simma, O., Zebedin, E.-V., Neugebauer, N., Schellack, C., Pilz, A., Chang-Rodriguez, S., Lingnau, K., Weisz, E., Felzmann, T., Müller, M., Decker, T., Sexl, V. and Dagmar Stoiber. 2009. Loss of Tyk2 reveals defect in CTL dependent tumor surveillance. **Cancer Res.** 69 :203-11.
18. Stockinger, S., Kastner, R., Kernbauer, E., Pilz, A., Westermayer, S., Reutterer, B., Soulat, D., Stengl, G. Vogl, C., Frenz, T., Waibler, Z., Taniguchi, T., Rüllicke, T., Kalinke, U., Müller, M. and T. Decker. 2009. Characterization of the interferon-producing cell in mice infected with *Listeria monocytogenes*. **PLOS Pathogens**, 5(3): e1000355. doi:10.1371/journal.ppat.1000355.
19. Maldonado, R.A., Soriano, M.A., Perdomo, C., Sigrist, K., Irvine, D.J., Decker, T. and L.H. Glimcher. 2009. Control of T Helper Cell Differentiation Through Cytokine Receptor Inclusion in The Immunological Synapse. **J. Exp. Med.** 206:877-92.
20. Pilz, A., Kratky, W., Stockinger, S., Simma, O., Kalinke, U., Lingnau, K., von Gabain, A., Stoiber, D., Sexl, V., Kolbe, T., Rüllicke, T., Müller, M. and T. Decker. 2009. Dendritic cells require Stat1 phosphorylated at its transactivating domain for the induction of peptide-specific CTL. **J. Immunol.** 183: 2286-2293.
21. Plumlee, C.R., Lee, C., Song, L., Prince, A., Beg, A., Decker, T., Shuman, H.A. and C. Schindler. 2009. Interferons direct an effective innate response to *Legionella pneumophila* infection. **J. Biol. Chem.** 284: 30058–30066,
22. Prchal, M., Pilz, A., Simma, O., Lingnau, K., von Gabain, A., Strobl, B., Müller, M. and Thomas Decker. 2009. Type I interferons as mediators of immune adjuvants for T- and B cell-dependent acquired immunity. **Vaccine**, 27S:G17-G20.
23. Farlik, M., Reutterer, B., Schindler, S., Greten, F., Vogl, C., Müller, M. and T. Decker. 2010. Stats and NF κ B co-regulate gene expression in infected cells through unconventional assembly of a transcription initiation complex. **Immunity**, 33:25-34.
24. Bourgeois, C., Majer, O., Frohner, I.E., Lesiak-Markowicz, I., Hildering, K.-S., Glaser, W., Stockinger, S., Decker, T., Akira, S., Müller, M. and Kuchler, K. 2011. Conventional dendritic cells mount a type I interferon-response against *Candida* spp requiring novel phagosomal TLR7 mediated IFN- β signaling. **J. Immunol.**, in press
25. Guarda, G., Braun, M., Staehli, S., Tardivel, A., Mattmann, C., Förster, I., Farlik, M., Decker, T., Du Pasquier, R. A., Romero, P. and J. Tschopp. 2011. Type I IFN inhibits IL-1 production and inflammasome activation. **Immunity**, in press