

# Prof. Christian Kurts, MD

## Institute of Experimental Immunology



### Rheinische Friedrich-Wilhelms-Universität Bonn

#### Institute of Experimental Immunology, Director

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#### Research Expertise

Prof. Kurts and his group are interested in the mechanisms governing antigen-presentation and the ensuing immune response in the defense against infections and in immune-mediated disease. Their main research projects focus on the mechanisms of antigen cross-presentation to cytotoxic CD8 T cells, peripheral immune tolerance of T and B lymphocytes against self antigens, and the role of dendritic cells in diseases, especially in kidney disease.

#### Education / Training

University of Göttingen, Germany Medicine MD, 1991

#### Appointments / Positions Held

2015 Speaker GRK 2168 Bo&Merang (Bonn & Melbourne Research and Graduate training Group)  
2013 Co-speaker SFB 704 "Molecular Mechanisms and Chemical Modulation of Local Immune Regulation" University of Bonn, Germany  
2012 Co-speaker SFB TR57 "Organ-Fibrosis", representing the Bonn site, University of Bonn, Germany  
2009 - present Director Institute of Experimental Immunology, University of Bonn, Germany  
2003 - 2008 Full Professor of Molecular Immunology University of Bonn, Germany  
2002 Visiting scientist, Stephen Schoenberger Group La Jolla Institute for Allergy and Immunology, CA, USA  
2000 - 2003 Research group leader, Dept. of Nephrology and Clinical Immunology, University of Aachen, Germany  
1998 - 2000 Medical Officer and Research Fellow, Hannover Medical School, Germany  
1997 - 1998 Postdoctoral Research Fellow, Dept of Microbiology, Monash Medical School, Melbourne, Australia  
1995 - 1997 Postdoctoral Research Fellow, Thymus Biology Unit, The Walter and Eliza Hall Institute for Medical Research (WEHI), Melbourne, Australia  
1991 - 1995 Medical Officer and Research Fellow, Hannover Medical School, Germany

#### Honors / Awards

2016  
Elected member DFG Fachkollegium (Review Board) Inflammation/Nephrology

2014  
Elected member German National Academy of Sciences Leopoldina

2012  
Gottfried-Wilhelm-Leibniz-Prize of the DFG

2010  
Hans-U.-Zollinger-Award of the German Society for Nephrology

2000  
Heisenberg-Fellowship of the Deutsche Forschungsgemeinschaft

1999  
Sir Hans Krebs award for basic medical research

1992  
Annual award of the German Society of Nephrology for best doctoral thesis

1986 - 1991  
Fellowship Studienstiftung des deutschen Volkes (German National Academic Foundation)

#### 10 Most Relevant Publications for Prof. Christian Kurts

1. Schiwon M, Weisheit C, Franken L, Gutweiler S, Dixit A, Meyer-Schwesinger C, Pohl J, Maurice NJ, Thiebes S, Lorenz K, Quast T, Fuhrmann M, Baumgarten G, Lohse MJ, Opdenaker G, Bernhagen J, Bucala R, Panzer U, Kolanus W, Gröne HJ, Garbi N, Kastenmüller W, Knolle PA, **Kurts C\***, Engel DR\*. 2014. Crosstalk between sentinel and helper macrophages permits neutrophil migration into infected uroepithelium. *Cell*, 156:456–68, (\*joint senior authorship)
2. Kastenmüller W, Kastenmüller K, **Kurts C**, Seder RA. Dendritic Cell Targeted Vaccines - Hype or Hope? 2014. *Nat Rev Immunol*, 14(10):705-11
3. **Kurts C**, Panzer U, Anders HJ, Rees A. 2013. The immune system and kidney disease: basic concepts and clinical implications. *Nat Rev Immunol*, 13(10):738-53.
4. Hochheiser K, Heuser C, Krause TA, Teteris S, Ilias A, Weisheit C, Hoss F, Tittel AP, Panzer U, Knolle PA, Engel DR, Tharaux PL, **Kurts C**. 2013. Exclusive CX3CR1-dependence of kidney cortex dendritic cells identifies a therapeutic target in glomerulonephritis. *J Clin Invest*, 123(10):4242-54.
5. Gottschalk C, Damuzzo V, Gotot J, Kroczeck R, Yagita H, Murphy KM, Knolle PA, Ludwig-Portugall I, **Kurts C**. 2013. Batf3-dependent renal lymph node DCs maintain immune-homeostasis against circulating antigens; *J Am Soc Nephrol*, 24:543-9.
6. Gotot J, Gottschalk C, Leopold S, Knolle PA, Yagita H, **Kurts C\***, Ludwig-Portugall I\*. 2012. Direct PD-1-mediated suppression of autoreactive B cells by regulatory T cells. *PNAS* 109(26):10468-7. (\*joint senior authorship)
7. Tittel AP, Heuser C, Ohliger C, Yona S, Hämmerling GJ, Engel DR, Garbi N, **Kurts C**. 2012. Functionally relevant neutrophilia in CD11c-diphtheria toxin receptor transgenic mice. *Nat Methods* 9(4):385-90.
8. Engel DR, Koscielny A, Wehner S, Maurer J, Schiwon M, Schumak B, Limmer A, Sparwasser T, Hirner A, Knolle PA, Kalff JC, **Kurts C**. 2010. Th1 memory cells disseminate post-operative ileus over the entire intestinal tract. *Nat Med*, 16(12):1407–1413.
9. Semmling V, Lukacs-Kornek V, Thaiss CA, Quast T, Hochheiser K, Panzer U, Rossjohn J, Perlmutter P, Cao J, Godfrey DI, Savage PB, Knolle PA, Kolanus W, Forster I, **Kurts C**. 2010. Alternative cross-priming through CCL17-CCR4-mediated attraction of CTLs toward NKT cell-licensed DCs. *Nat Immunol* 11: 313-20.
10. **Kurts C**, Robinson BW, Knolle PA. 2010. Cross-priming in health and disease. *Nat Rev Immunol* 10: 403-14.

\*These authors contributed equally