

PERSONAL INFORMATION

Family name, First name: Sparwasser, Tim

Gender: male

Date of birth: 08.01.1969

URL for web site: <http://www.unimedizin-mainz.de/medizinische-mikrobiologie-und-hygiene/startseite/kontakt-anfahrt/institutsleitung.html>

ORCID: orcid.org number 0000-0001-5645-902X

• EDUCATION

- 2008 Habilitation, Institute f. Med. Microbiology, Immunology & Hygiene, TU Munich (Supervisor: Prof. Dr. H. Wagner)
- 1997 Approbation as a doctor of human medicine
- 1996 MD (Dr. med) in Medicine (Johannes Gutenberg University Mainz (Supervisor Prof. Dr. med. S. Bhakdi)
- 1994 –1995 Studies of Human Medicine, Ludwig-Maximilian-University Munich
- 1989 –1994 Studies of Human Medicine, Johannes Gutenberg University Mainz

• CURRENT POSITION

- 2018 to date W3-Professor & Chair, Institute of Medical Microbiology and Hygiene, University of Mainz Medical Center of the Johannes Gutenberg-University, Mainz

• PREVIOUS POSITIONS

- 2008 – 2018 W3-Professor of Infection Immunology; Director, Institute of Infection Immunology, TWINCORE, Centre for Experimental and Clinical Infection Research / Hannover Medical School (MHH)
- 2008 – 2002 Group leader and specialization in Medical Microbiology (Residency), Institute f. Medical Microbiology, Immunology & Hygiene, Technical University Munich
- 1999 – 2002 Howard Hughes Medical Institute (HHMI) Postdoctoral Fellow, Skirball Institute of Biomolecular Medicine, NY University Medical Center, New York
- 1997 – 1999 Postdoctoral Fellow and Residency, Institute f. Med. Microbiology, Immunology & Hygiene, TU Munich
- 1996 – 1997 Internship (“AiP”) and Postdoctoral Fellow, Institute f. Med. Microbiology, Immunology & Hygiene, TU Munich

Tim Sparwasser is Professor and Director of the Institute of Medical Microbiology and Hygiene of the University Medical Center of the Johannes Gutenberg-University, Mainz. He obtained his MD from the Johannes-Gutenberg University in Mainz and studied human Medicine in Mainz, Basel, New York and Munich (Ludwig-Maximilians University). With a fellowship from the Howard Hughes Medical Institute he did a Post-Doc in the laboratory of Dan Littman at the Skirball Institute (New York University). After completing his specialization at the Institute of Medical Microbiology (Director Hermann Wagner), Technical University Munich, he was appointed W3 professor at Hannover Medical School in 2008 and Director of the TWINCORE Institute of Infection Immunology. He remained in that position until 2018. His main research interest is investigating novel vaccination strategies with a special focus on dendritic cells and regulatory T cells. His work has led to the discovery of CpG Oligonucleotides as potent adjuvants and activators of dendritic cells. The development of the DEREK mouse model allowed to prove the role of regulatory T cells during infection and (anti-cancer) immunity and shed light on their development and relevance for maintenance of peripheral tolerance. Only recently his team discovered a new mechanism of immune modulation of pro-inflammatory Th17 cells using small natural compounds that interfere with fatty acid metabolism and allow the generation of anti-inflammatory Foxp3 regulatory T cells.

Selected publications

1. Raud B, Roy DG, Divakaruni AS, Tarasenko TN, Franke R, Ma EH, Samborska B, Hsieh WY, Wong AH, Stuve P, Arnold-Schrauf C, Guderian M, Lochner M, Rampertaap S, Romito K, Monsale J, Bronstrup M, Bensinger SJ, Murphy AN, McGuire PJ, Jones RG, **Sparwasser T***, and Berod L*. 2018. Etomoxir Actions on Regulatory and Memory T Cells Are Independent of Cpt1a-Mediated Fatty Acid Oxidation. *Cell Metabolism* 28:504-515 e507.* *equal contribution*
2. Puttur, F., M. Francozo, G. Solmaz, C. Bueno, M. Lindenberg, M. Gohmert, M. Swallow, D. Tufa, R. Jacobs, S. Lienenklaus, A.A. Köhl, L. Borkner, L. Cicin-Sain, B. Holzmann, H. Wagner, L. Berod and **T. Sparwasser**. 2016. Conventional Dendritic Cells Confer Protection Against Mouse Cytomegalovirus Infection via TLR9 and MyD88 Signaling *Cell Reports* 17(4): 1113-1127

3. Dudek, M., F. Puttur, C. Arnold-Schrauf, A.A. Kuhl, B. Holzmann, B. Henriques-Normark, L. Berod, and **T. Sparwasser**. 2015. Lung epithelium and myeloid cells cooperate to clear acute pneumococcal infection. *Mucosal Immunol*
4. Berod, L., C. Friedrich, A. Nandan, J. Freitag, S. Hagemann, K. Harmrolfs, A. Sandouk, C. Hesse, C.N. Castro, H. Bahre, S.K. Tschirner, N. Gorinski, M. Gohmert, C.T. Mayer, J. Huehn, E. Ponimaskin, W.R. Abraham, R. Muller, M. Lochner, and **T. Sparwasser**. 2014. De novo fatty acid synthesis controls the fate between regulatory T and T helper 17 cells. *Nature Medicine* 20:1327-1333.
5. Arnold-Schrauf, C., M. Dudek, A. Dielmann, L. Pace, M. Swallow, F. Kruse, A.A. Kuhl, B. Holzmann, L. Berod, and **T. Sparwasser**. 2014. Dendritic cells coordinate innate immunity via MyD88 signaling to control *Listeria monocytogenes* infection. *Cell Reports* 6:698-708.
6. Mayer, C.T., P. Ghorbani, A. Nandan, M. Dudek, C. Arnold-Schrauf, C. Hesse, L. Berod, P. Stuve, F. Puttur, M. Merad, and **T. Sparwasser**. 2014. Selective and efficient generation of functional Batf3-dependent CD103+ dendritic cells from mouse bone marrow. *Blood* 124:3081-3091
7. Puttur, F., C. Arnold-Schrauf, K. Lahl, G. Solmaz, M. Lindenberg, C.T. Mayer, M. Gohmert, M. Swallow, C. van Helt, H. Schmitt, L. Nitschke, B.N. Lambrecht, R. Lang, M. Messerle, and **T. Sparwasser**. 2013. Absence of Siglec-H in MCMV infection elevates interferon alpha production but does not enhance viral clearance. *PLoS Pathogens* 9:e1003648.
8. Pace, L., A. Tempez, C. Arnold-Schrauf, F. Lemaitre, P. Bousso, L. Fetler, **T. Sparwasser**, and S. Amigorena. 2012. Regulatory T cells increase the avidity of primary CD8+ T cell responses and promote memory. *Science* 338:532-536.
9. Klages, K., C.T. Mayer, K. Lahl, C. Loddenkemper, M.W. Teng, S.F. Ngiow, M.J. Smyth, A. Hamann, J. Huehn, and **T. Sparwasser**. 2010. Selective depletion of Foxp3+ regulatory T cells improves effective therapeutic vaccination against established melanoma. *Cancer Res* 70:7788-7799.
10. Lahl, K., C. Loddenkemper, C. Drouin, J. Freyer, J. Arnason, G. Eberl, A. Hamann, H. Wagner, J. Huehn, and **T. Sparwasser**. 2007. Selective depletion of Foxp3+ regulatory T cells induces a scurfy-like disease. *J Exp Med* 204:57-63.

Publications: In total **205** (to date September 2019) publications in peer-reviewed journals (total Impact Factors: **>1822**, according to Scopus, citations: **>14030**, h-index **57**, average citations/publication: **50**)

Extended CV:

- FELLOWSHIPS AND AWARDS

1999 – 2002 HHMI Postdoctoral Fellowship Award for Physicians
 1999 DGHM Young Investigator Award (German Society of Microbiology & Hygiene)
 1989 – 1995 German National Academic Foundation (“*Studienstiftung des deutschen Volkes*”)

- SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2003 to date 4 Bachelor -, 12 Master- , 34 PhD (incl. 8 MD students) and 10 postdoctoral fellows

- TEACHING ACTIVITIES

2003 to date: Immunology lecture for biology, biotechnology & biochemistry students (TUM), Immunology course for biochemistry students (TUM) Microbiology / Immunology course for medical students (TUM), Immunology course for biology students (TUM), Immunology lecture (ZIB, MHH), Immunology course, Dendritic Cells, Tregs (ZIB, MHH), Immunology lecture (MHH), Medical Microbiology (UM)

- ORGANISATION OF SCIENTIFIC MEETINGS

2006-2017 St. Johann Meeting, Angerer Alm, Tirol (Austria)
 2009-2011 Life Science College of the German Ntl. Scholarship Foundation
 2009 8. Workshop Dendritic Cells and Regulatory T Cells, Hannover (Germany)
 2011-2017 Twincore Symposia, Hannover
 2011-2017 DAAD Summer Academy “LISA”, Hannover (Germany)
 2012-2017 German - Argentinean Workshop “Infection Biology”, Buenos Aires / Córdoba (Argentina)

- INSTITUTIONAL RESPONSIBILITIES

2007-2008 Board member of the TR 22
 2009-2013 Board member of the Collaborative Research Center (SFB 587)
 2010 to date Advisory Board Member of GRK 1660
 2014 to date Advisory Board Member DGFI
 2014 to date Member of the International Council of Hannover Medical School
 2016 to date Member COALITION/ CIIM
 2016 to date Chairman DGfI Jury of Fritz -and Ursula Melcher Award

2018 to date Associate Researcher Center for Research in Inflammatory Diseases – CRID Ribeirao Preto Medical School, University of Sao Paulo CRID Ribeirao Preto Medical School, University of Sao Paulo

2019 to date Council member IUIS

- **COMMISSIONS OF TRUST**

External Reviewer for Institutions: AERES (Agence d'Evaluation de la Recherche et des établissements d'Enseignement Supérieur), ANR (Agence National de la Recherche), Boehringer Ingelheim Foundation, Bonner Forum Biomedizin, DAAD, DFG, ETH Zürich, EU (EULARINET; ERC), FWO (Research Foundation Flanders), Permanent Member Expert Panel, Health Research Board (HRB) Ireland, JSPS (Japan Society for the Promotion of Science), National Science Centre Poland, High Council for the Evaluation of Research and Higher Education (HCERES) France Israel Science Foundation, The Wellcome Trust, Telethon (Italien), Swiss National Science Foundation (SNSF), SPP (Forschungskommission Medizin Universität Lübeck), Studienstiftung des deutschen Volkes, Stiftung Rheinland-Pfalz für Innovation, Universität Magdeburg Universitätsmedizin Mainz, Westfälische Wilhelm Universität Münster External Reviewer for Journals: Archives of Microbiology, BioTechniques, Blood, Clinical Cancer Research, European Journal of Immunology, Experimental Dermatology, Expert Review of Vaccines, FEMS Immunology & Medical Microbiology, Frontiers in Immunological Tolerance (Editorial Board), Future Medicine, Future Microbiology, Gastroenterology, Gene Therapy, Genesis, Human Immunology, Immunobiology, Immunology, Immunology Letters, International Archives of Allergy and Immunology, J. Allergy Clin. Immunol., J. Clin. Invest., J. Exp. Medicine, J. Immunology, J. of Neuroinflammation, J. Immunol. Methods, Journal of Investigative Dermatology, Life Sciences, Mucosal Immunology, Molecular Oncology, Nature Immunology, Nat Reviews Immunol, Nature Medicine, PlosOne, PlosGenetics, PNAS, Transgenic Research, Trends in Immunology

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

2003 to date: German Society for Hygiene and Microbiology (DGHM); German Society for Immunology (DGfI); EMDS, TCC-Europe, 2003-2015: The American Association of Immunologists (AAI)

- **MAJOR COLLABORATIONS**

Yvette van Kooyk (VUmc Amsterdam, NL), Shimon Sakaguchi (Osaka University, Japan), Sebastian Amigorena (Institut Curie, France), Gabriel Rabinovich (IBYME/CONICET Buenos Aires, Argentina), Hugo Luján (Universidad Católica Córdoba, Argentina)

- **GRANTED PATENT(S)**

DEREG mouse line B63712, pDCre mouse line B68065, EP14001331.9 „Neosoraphens“

- **INVITED PRESENTATIONS TO PEER-REVIEWED. INTERNATIONALLY ESTABLISHED CONFERENCES AND/OR INTERNATIONAL ADVANCED SCHOOLS**

Total invitations to date: 178. Domestic: 107, International 71. Invitations include: International Workshop Immunology of CpG-DNA Schloss Ellmau, MPI Grad College Schloss Ringberg, Keystone DC Meeting, WIRM Davos, Internatl. Immunology Conf. Rio, Riken Inst. Yokohama, Annual Meeting Immunolog. Fribourg, 22nd ENII Conf. Capo Caccia, DC-Thera Annual Meeting Athens, 117. Meeting German Society of Internal Medicine, 14th Australian Autoimmunity Workshop Brisbane, Symp. Northern Germany Immunology (NDI) Borstel, Karolinska Institut Stockholm, Arg. Immunology Society Córdoba, VIB Ghent, Immunology Forum Cambridge, SPI Annual Meeting Lissabon, Herrenhausen / Nature Medicine Symposium Hannover, Keystone meeting Dublin, Inflammia Brazil

- **PRIZES AND AWARDS**

1999 – 2002 HHMI Postdoctoral Fellowship Award for Physicians

1999 DGHM Young Investigator Award (German Society of Microbiology & Hygiene)

- **ON-GOING Grants**

Project Title	Funding source	Amount	Period
TRR 156/2, TP B08 Modulation der entzündlichen Hauterkrankungen durch Blockade metabolischer Checkpoints	DFG/SFB	€464.100,00	Jul 2019 – Jun 2023
Cellular Metabolism of Treg in the	DFG	€353.350,00	Sep 2017 - Aug. 2020

control of chronic inflammatory diseases			
Georg Forster Collaboration	Alexander v. Humboldt	€25.000,00	Jan 2017 – Dec 2019
SFB 900 TP B 7 “Understanding innate and regulatory immune mechanisms against mycobacteria to optimize vaccine strategies	DFG	€436.500,00	July 2014 - July 2018