

Prof. Veit Hornung, MD

Gene Center and Department of Biochemistry



Gene Center and Department of Biochemistry
Ludwig-Maximilians-University Munich
Rheinische Friedrich-Wilhelms-Universität Bonn

Institute of Molecular Medicine, Director

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Research Expertise

Prof. Hornung has expertise in pattern recognition, innate immunology, macrophages, dendritic cells, RNA biology and genome engineering technologies.

Education / Training

University of Munich, Germany, Clinical Pharmacology MD thesis, 2004

University of Munich, LMU, including exchange rotations at Harvard University, USA, and University of Zürich, Switzerland, Clinical Medicine, MD, 2003

Appointments / Positions Held

since 2015

Chair of Immunobiochemistry, Gene Center and Department of Biochemistry, Ludwig-Maximilians-University Munich

2014 - 2015

Director (W3) Institute of Molecular Medicine, University Hospital, University of Bonn

2008 - 2013

Professor of Clinical Biochemistry, Institute for Clinical Chemistry and Clinical Pharmacology, University of Bonn, Germany

2006 - 2008

Postdoctoral research fellow, Division of Infectious Diseases and Immunology, University of Massachusetts, USA

2005 - 2006

Group leader, Division of Clinical Pharmacology University of Munich, Germany

2003 - 2005

Research Fellow, Division of Clinical Pharmacology, University of Munich, Germany

Honors / Awards

2015

Elected EMBO Member

2015

ERC Consolidator Grant

2013

Pettenkofer Prize of the Max von Pettenkofer Foundation

2010

Award for Basic Medical Research of the GlaxoSmithKline Foundation

2010

Paul-Martini-Prize of the Paul-Martini-Foundation

2009

ERC Starting Grant

2007

Heinz Maier Leibnitz Prize of the German Research Foundation

2006

Graduate-Scholarship of the Novartis-Foundation for Therapeutical Research

2002

Study Scholarship of the Munich-Harvard-Alliance

2000 - 2003

Fellow of the German National Academic Foundation

10 Most Relevant Publications for Prof. Veit Hornung

1. Ablasser, A., J. L. Schmid-Burgk, I. Hemmerling, G. L. Horvath, T. Schmidt, E. Latz and **V. Hornung**. Cell intrinsic immunity spreads to bystander cells via the intercellular transfer of cGAMP Nature, 2013; 503:530-534.
2. Ablasser, A., M. Goldeck, T. Cavlar, T. Deimling, G. Witte, I. Rohl, K. P. Hopfner, J. Ludwig and **V. Hornung**. cGAS produces a 2'-5'-linked cyclic dinucleotide second messenger that activates STING Nature, 2013; 498: 380-384.
3. Bartok, E., F. Bauernfeind, M. G. Khaminets, C. Jakobs, B. Monks, K. A. Fitzgerald, E. Latz and **V. Hornung**. iGLuc: a luciferase-based inflammasome and protease activity reporter Nat Methods, 2013; 10: 147-154.
4. Schmid-Burgk, J. L., T. Schmidt, V. Kaiser, K. Honing and **V. Hornung**. A ligation-independent cloning technique for high-throughput assembly of transcription activator-like effector genes Nat Biotechnol, 2013; 31: 76-81.
5. Duewell, P., H. Kono, K. J. Rayner, C. M. Sirois, G. Vladimer, F. G. Bauernfeind, G. S. Abela, L. Franchi, G. Nunez, M. Schnurr, T. Espevik, E. Lien, K. A. Fitzgerald, K. L. Rock, K. J. Moore, S. D. Wright, **V. Hornung*** and E. Latz*. NLRP3 inflammasomes are required for atherogenesis and activated by cholesterol crystals Nature, 2010; 464: 1357-1361.
6. Ablasser, A., F. Bauernfeind, G. Hartmann, E. Latz, K. A. Fitzgerald and **V. Hornung**. RIG-I-dependent sensing of poly (dA:dT) through the induction of an RNA polymerase III-transcribed RNA intermediate Nat Immunol, 2009; 10: 1065-1072.
7. **Hornung, V.**, A. Ablasser, M. Charrel-Dennis, F. Bauernfeind, G. Horvath, D. R. Caffrey, E. Latz and K. A. Fitzgerald. AIM2 recognizes cytosolic dsDNA and forms a caspase-1-activating inflammasome with ASC Nature, 2009; 458: 514-518.
8. **Hornung, V.***, F. Bauernfeind*, A. Halle, E. O. Samstad, H. Kono, K. L. Rock, K. A. Fitzgerald and E. Latz. Silica crystals and aluminum salts activate the NALP3 inflammasome through phagosomal destabilization Nat Immunol, 2008; 9: 847-856.
9. **Hornung, V.**, J. Ellegast, S. Kim, K. Brzozka, A. Jung, H. Kato, H. Poeck, S. Akira, K. K. Conzelmann, M. Schlee, S. Endres and G. Hartmann. 5'-Triphosphate RNA is the ligand for RIG-I Science, 2006; 314: 994-997.
10. **Hornung, V.**, M. Guenther-Biller, C. Bourquin, A. Ablasser, M. Schlee, S. Uematsu, A. Noronha, M. Manoharan, S. Akira, A. de Fougerolles, S. Endres and G. Hartmann. Sequence-specific potent induction of IFN-alpha by short interfering RNA in plasmacytoid dendritic cells through TLR7 Nat Med, 2005; 11: 263-270.

*These authors contributed equally