# Dr. Andrea Ablasser, MD

## Institute of Clinical Chemistry and Clinical Pharmacology

**Rheinische Friedrich-Wilhelms-Universität Bonn**
**Institute of Clinical Chemistry and Clinical Pharmacology**
**École Polytechnique Féderale de Lausanne, Switzerland (since April 2014)**

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### Research Expertise

Dr. Ablasser's main research focus is the immunorecognition of nucleic acids. Her work has contributed to identifying intracellular DNA sensors and to elucidating DNA-triggered antiviral signaling mechanisms.

### Education / Training

University of Munich, Germany, Medicine, M.D., thesis, 2010
University of Munich, Germany, Medicine, M.D., state examination, 2008

### Appointments / Positions Held

Since 2014
Assistant Professor, Global Health Institute, École Polytechnique Féderale de Lausanne, Switzerland

2011 - 2014
Junior Group Leader, Institute of Clinical Chemistry and Clinical Pharmacology, University of Bonn, Germany

2008 - 2011
Postdoctoral Research Fellow, Department of Clinical Chemistry and Clinical Pharmacology, University of Bonn, Germany

2008
Visiting scientist, Division of Infectious Diseases and Immunology, University of Massachusetts, Worcester, USA

### Honors / Awards

2014
Swiss National Science Foondation (SNSF)-ERC Starting Grant
2014
Paul Ehrlich- und Ludwig Darmstaedter Prize for Young Researchers
2013
Max von Pettenkofer Prize
2013
Jürgen Wehland Prize
2010
Dissertation Price of the University of Munich (Münchener Universitätsgesellschaft)

2009
Fellow of the program "BONFOR", Medical Faculty, University of Bonn

2007
Fellow of the Munich-Harvard-Alliance
Fellow of the German Academic Exchange Service (DAAD)

2006
Graduate School 1202 "Oligonucleotides in cell biology an therapy", German Research Foundation (DFG)

2005
Fellow of the German National Merit Foundation (Studienstiftung des Deutschen Volkes)

### 10 Most Relevant Publications for Dr. Andrea Ablasser

1. Hornung V, Hartmann R, **Ablasser A** and Hopfner KP. OAS proteins and cGAS: unifying concepts in sensing and responding to cytosolic nucleic acids, in Nature Reviews Immunology, vol. 14, num. 8, p. 521-528, 2014.
2. **Ablasser A**, Hemmerling I, Schmid-Burgk JL, Behrendt R, Roers A, Hornung V. TREX1-deficiency triggers cell-autonomous immunity in a cGAS-dependent manner. Journal of Immunology. 2014, in press
3. **Ablasser A**, Schmid-Burgk JL , Hemmerling I, Horvath G, Schmidt T, Latz E, Hornung V. Cell intrinsic immunity spreads to bystander cells via the intercellular transfer of cGAMP. Nature 2013 Sep 29. doi: 10.1038/nature12640
4. **Ablasser A**, Goldeck M, Cavlar T, Deimling T, Witte G, Röhl I, Hopfner K-P, Ludwig J, Hornung V. cGAS produces a 2´-5´-linked cyclic dinucleotide second messenger that activates STING. Nature 2013 Jun 20;498(7454):380-4. doi: 10.1038/nature12306.
5. Civril F, Deimling T, de Oliveira Mann C. C, **Ablasser A**, Moldt M, Witte G, Hornung V, Hopfner K-P. Structural mechanism of cytosolic DNA sensing by cGAS. Nature 2013 Jun 20; 498 (7454):332-7. doi: 10.1038/nature12305.
6. Cavlar T, Deimling T, **Ablasser A,** Hopfner KP, Hornung V. Species-specific detection of the antiviral small-molecule compound CMA by STING. EMBO J. 2013 May; 15;32 (10): 1440-50.
7. **Ablasser A**, Bauernfeind F, Hartmann G, Latz E, Fitzgerald KA, Hornung V. RIG-I-dependent sensing of poly(dA:dT) through the induction of an RNA polymerase III-transcribed RNA intermediate. Nature Immunology. 2009; 10 (10):1065-72.
8. **Ablasser A**, Poeck H, Anz D, Berger M, Schlee M, Kim S, Bourquin C, Goutagny N, Jiang Z, Fitzgerald KA, Rothenfusser S, Endres S, Hartmann G, Hornung V. Selection of molecular structure and delivery of RNA oligonucleotides to activate TLR7 versus TLR8 and to induce high amounts of IL-12p70 in primary human monocytes. Journal of Immunology. 2009 Jun 1;182 (11): 6824-33.
9. Berger M, **Ablasser A**, Kim S, Bekeredjian-Ding I, Giese T, Endres S, Hornung V, Hartmann G. TLR8 driven IL-12-dependent reciprocal and synergistic activation of NK cells and monocytes by immunostimulatory RNA. Journal of Immunotherapy. 2009 Apr; 32 (3): 262-71.
10. Hornung V, **Ablasser A**, Charrel-Dennis M, Bauernfeind F, Horvath G, Caffrey DR, Latz E, Fitzgerald KA. AIM2 recognizes cytosolic dsDNA and forms a caspase-1-activating inflammasome with ASC. Nature. 2009 Mar 26; 458 (7237): 514-8.