

# Dr. Katarzyna Placek

Life and Medical Sciences Institute



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LIMES Institute

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## Research Expertise

My main research interest lies in understanding the epigenetic and metabolic processes governing immune cell responses. We study these mechanisms using mouse models and patient material in the context of chromatinopathies caused by epigenetic enzyme deficiencies and gd T cell-based therapies. The aim of our research is to inform future therapeutic interventions.

## Education / Training

PhD Immunology, University of Paris (former Paris 7 Denis Diderot), Paris, France, 2010

European Master of Genetics, University of Paris (former Paris 7 Denis Diderot), Paris, France, 2007

Bachelor of Science, Biotechnology, University of Warsaw, Warsaw, Poland, 2005

## Appointments / Positions Held

Since 2020

Junior Group Leader, Life and Medical Sciences Institute, University of Bonn, Bonn, Germany

2018-2020

Marie Skłodowska-Curie Fellow, Life and Medical Sciences Institute, University of Bonn, Bonn, Germany

2011-2017

Visiting Fellow, National Heart, Lung and Blood Institute (NHLBI), National Institutes of Health (NIH), Bethesda, MD, USA

## Honors / Awards

2018-2020

Marie Skłodowska-Curie Actions Individual Fellowship of European Commission

2015

NIH Fellows Award for Research Excellence (FARE)

2006-2007

Conseil Regional Ile-de-France Scientific Scholarship

2005-2006

Ministry of Higher Education of the Polish Government Scientific Scholarship

2005-2006

Erasmus-Socrates Scholarship of the European Commission

2003-2005

Warsaw University Scientific Scholarship

## 10 Most Relevant Publications for Dr. Katarzyna Placek

1. Karagiannis F, Peukert K, Surace L, Michla M, Nikolka F, Fox M, Weiss P, Feuerborn C, Maier P, Schulz S, Al B, Seeliger B, Welte T, David S, Grondman I, de Nooijer AH, Pickkers P, Kleiner JL, Berger MM, Brenner T, Putensen C; Bonn COVIMMUNE Consortium; Kato H, Garbi N, Netea MG, Hiller K, **Placek K**, Bode C, Wilhelm C. (2022) Impaired ketogenesis ties metabolism to T cell dysfunction in COVID-19. *Nature* 609(7928):801-807. doi: 10.1038/s41586-022-05128-8
2. **Placek K**, Hu G, Cui K, Zhang D, Ding Y, Lee JE, Jang Y, Wang C, Konkel JE, Song J, Liu C, Ge K, Chen W, Zhao K. (2017) MLL4 prepares the enhancer landscape for Foxp3 induction via chromatin looping. *Nat Immunol.* 18(9):1035-1045. doi: 10.1038/ni.3812.
3. Han Z, Cui K, **Placek K**, Hong N, Lin C, Chen W, Zhao K, Jin W. (2020) Diploid genome architecture revealed by multi-omic data of hybrid mice. *Genome Res.* 30(8):1097-1106. doi: 10.1101/gr.257568.119.
4. Yahia-Cherbal H, Rybczynska M, Lovecchio D, Stephen T, Lescale C, **Placek K**, Larghero J, Rogge L, Bianchi E. (2019) NFAT primes the human RORC locus for RORγt expression in CD4<sup>+</sup> T cells. *Nat Commun.* 16;10(1):4698. doi: 10.1038/s41467-019-12680-x.
5. **Placek K**, Gasparian S, Coffre M, Maiella S, Sechet E, Bianchi E, Rogge L. (2009) Integration of distinct intracellular signaling pathways at distal regulatory elements directs T-bet expression in human CD4<sup>+</sup> T cells. *J Immunol.* 15;183(12):7743-51. doi: 10.4049/jimmunol.0803812
6. Northrup D, Yagi R, Cui K, Proctor WR, Wang C, **Placek K**, Pohl LR, Wang R, Ge K, Zhu J, Zhao K. (2017) Histone demethylases UTX and JMJD3 are required for NKT cell development in mice. *Cell Biosci.* 17;7:25. doi: 10.1186/s13578-017-0152-8.
7. Netea MG, Schlitzer A, **Placek K**, Joosten LAB, Schultze JL. (2019) Innate and Adaptive Immune Memory: an Evolutionary Continuum in the Host's Response to Pathogens. *Cell Host Microbe.* 25(1):13-26. doi: 10.1016/j.chom.2018.12.006.
8. Bhat J, **Placek K**, Faissner S. (2022) Contemplating Dichotomous Nature of Gamma Delta T Cells for Immunotherapy. *Front Immunol.* 20;13:894580. doi: 10.3389/fimmu.2022.894580
9. **Placek K**, Schultze JL, Netea MG. (2019) Immune memory characteristics of innate lymphoid cells. *Curr Opin Infect Dis.* 32(3):196-203. doi: 10.1097/QCO.0000000000000540
10. **Placek K**, Schultze JL, Aschenbrenner AC. (2019) Epigenetic reprogramming of immune cells in injury, repair, and resolution. *J Clin Invest.* 129(8):2994-3005. doi: 10.1172/JCI124619