

# Medical Immunology Campus Erlangen

## Speaker

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## Aims and structure

The Medical Immunology Campus Erlangen, an interdisciplinary center at the Faculty of Medicine, was founded in March 2009 in order to provide a common organizational platform to scientists from all areas of immunobiology and clinical immunology. Since then, several institutes, departments, divisions, and research groups of the UK Erlangen, the Faculties of Medicine and of Sciences of the FAU, the Fraunhofer Institute for Integrated Circuits (IIS), and the Max Planck-Institute for the Science of Light (MPL) have been integrated into the Campus. The Medical Immunology Campus Erlangen organizes scientific seminars and lectures, promotes the research of its members by public relation activities, develops teaching concepts for immunology in the Bachelor's and Master's degree programs of "Molecular Medicine" and in the elite master program "Integrated Immunology", and coordinates the participation in competitive federal funding initiatives. Three times a year, the Campus publishes a newsletter, which reports on exciting publications, honors, and awards of the Campus' almost 100 members and also introduces new members.

## Research

The researchers of the Medical Immunology Campus Erlangen investigate the basic mechanisms of the development, composition, function, and deficiencies of the immune system. By translating the results into clinical approaches, new and personalized methods for the prevention, diagnosis, and therapy of autoimmune, inflammatory, malignant, and infectious diseases are developed. During the reporting period, the scientists of the Campus succeeded in setting up a new immunological SFB together with an integrated GK which

in its first phase will be funded by the DFG from Juli 2018 until June 2022 (TRR 241 „Immune-epithelial communication in inflammatory bowel disease“, compare own report). In addition, we hope for the approval of the GK 2504/1 „Novel antiviral approaches: From small molecules to immune intervention“ (designated speaker: Prof. Dr. K. Überla), which was positively evaluated in December 2018, as well as for the success of two further GK initiatives, which are currently in the stage of preparing the full proposal (GK 2559/1 „Immunomicrotope: Microenvironmental, metabolic, and microbial signals regulating immune cell-pathogen interventions“, designated speaker: Prof. Dr. C. Bogdan) or waiting for the decision on the preproposal (GK „Molekulare Stimulatoren und Kontrolleure der adaptiven Immunantwort“, designated speaker: Prof. Dr. H.-M. Jäck).

## Teaching

The members of the Medical Immunology Campus Erlangen are involved in teaching medical students and students of the Bachelor's and Master's degree programs of Molecular Medicine at the Faculty of Medicine as well as students of the life science programs at the Faculty of Sciences. In the winter term 2018/2019, a new elite master program on "Integrated Immunology" started, which is jointly run by the department of Biology and the Faculty of Medicine and financed by the Elite Network Bavaria. Furthermore, the Campus promotes scientific exchange by hosting national and international speakers of a broad, interdisciplinary range of topics at the weekly Immunological Colloquium. The annual Joachim Kalden Lecture was initiated by the Medical Immunology Campus Erlangen in order to honor outstanding researchers with substantial impact on immunological research. Prof. Tak Wah Mak, Director of the Campbell Family Institute for Breast Cancer Research (Toronto, Canada) and Prof. Bruce Walker, Director of the Ragon Institute of MGH, MIT and Harvard, Boston, USA, delivered the Joachim Kalden Lecture on September 11, 2017 and December 10, 2018, respectively.

## Lectures

In September 2017, scientists of the Campus organized the 47<sup>th</sup> Annual meeting of the German Society of Immunology (DGfI) in the Heinrich-Ladesthall in Erlangen with more than 1.000 participants from 27 countries. In 2017 und 2018, the Medical Immunology Campus Erlangen invited 54 national and international scientists to give a lecture with the guest seminar series of the Campus. The following compilation is a selection of the complete list which can be viewed on the homepage of the Campus.

10.1.2017 Prof. A. Alimonti, Institute of Oncology Research, Bellinzona: Switzerland  
Reprogramming the tumor immune response for „prosenescence“ therapy for cancer

30.5.2017 Prof. A. Zippelius, Department of Biomedicine, University Hospital Basel: Switzerland  
Cancer Immunotherapy: Strategies for personalization and combination approaches

13.6.2017 PD Dr. S. Autenrieth, university hospital Tübingen  
Modulation of dendritic cells by bacterial pathogens

17.10.2017 Prof. M. Sieweke, Centre d'Immunologie de Marseille Luminy: France  
Stem cell like mechanisms of macrophage self renewal

7.11.2017 Prof. D. Finke, Universitäts-Kinderspital Basel: Switzerland  
License to operate - new insights into the regulation of ILC immune functions

14.11.2017 Prof. M. Dalod, Centre d'Immunologie de Marseille Luminy: France  
Deciphering how immune responses against infections or cancer are shaped by the cell types and states of mononuclear phagocytes

5.12.2017 Prof. S. Jung, Weizmann Institute of Science, Rehovot: Israel  
Macrophage strategies in gut and brain

23.1.2018 Prof. B. Ludewig, Institut für Immunbiologie, Kantonsspital St. Gallen: Switzerland  
Stromal cell – Innate lymphoid cell interaction

21.2.2018 K. van Gisbergen, PhD, Department of Hematopoiesis, Amsterdam: The Netherlands  
Hobit as a tool to study the differentiation of tissue-resident memory T cells

21.3.2018 T. Weinkopf, PhD, Department of Microbiology & Immunology, University of Arkansas for Medical Sciences: USA  
The Role of Vascular Remodeling during Leishmania Infection

17.4.2018 Dr. A. Triantafyllopoulou, Department of Rheumatology and Clinical Immunology, Charité Berlin  
DNA damage signals instruct macrophage differentiation in granulomatous diseases

24.4.2018, Prof. N. Gagliani, General, Visceral and Thoracic Surgery Department, UKE Hamburg-Eppendorf  
T cell functional heterogeneity and tissue-resident memory cells: Understanding immune homeostasis and its underlying mechanisms

15.5.2018 Prof. W. Kastanmüller, Institute of Experimental Immunology (IEI), University of Würzburg  
Concepts of T cell activation from a spatiotemporal perspective

12.6.2018 Prof. S. Vermeire, Department of Gastroenterology, university hospital Leuven: Belgium  
Novel therapeutic opportunities in IBD and where to place them

3.7.2018 Prof. A. van Sriel, Department of Tumor Immunology, University of Nijmegen: The Netherlands  
Tetraspanins: molecular organizers of the immune cell surface

