

Erlangen Center for Infection Research (ECI)

Speaker

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Aims and structure

The Erlangen Center for Infection Research (ECI) was founded as an interdisciplinary center of the FAU on July 28, 2010. ECI is a consortium of more than 30 professors and lecturers and their research groups that belong to the Faculty of Medicine (MF), the Department of Biology, the Department of Chemistry and Pharmacy, or the Department of Chemistry and Bioengineering (all Faculty of Sciences, NF). Infectious disease research is one of the key research areas at FAU and UK Erlangen. ECI focuses on the analysis of the pathogenesis of infections in order to improve the prevention, diagnosis, and therapy of infectious diseases in the long run. Accordingly, ECI aims at providing a close scientific interaction between medical doctors in the clinics (e.g. specialists for infectious diseases, dermatology, hematology, and oncology) as well as microbiologists, virologists, infectious disease immunologists, pathologists, clinical pharmacologists, pharmaceutical, organic, and inorganic chemists, and bioengineers. The necessity for an interdisciplinary and interfaculty cooperation and for combining the diverse scientific strength and know-how in the area of infection research becomes particularly apparent whenever novel anti-infectives, vaccines, or therapeutics for the treatment of immunopathological processes during chronic infections are to be developed. The broad spectrum of expertise of the ECI members in medicine and science will serve to open up new fields of research.

The organizational structure of the ECI comprises an executive board (Prof. Dr. S. Krappmann (MF, speaker), Prof. Dr. A. Burkovski (NF, deputy speaker)) and a planning team, consisting of the board together with five university lecturers (Prof. Dr. A. Bozec (MF), PD. Dr. A. Lührmann (MF), Dr. M. Petter (MF), Prof. Dr. K. Überla (MF), and Prof. Dr. S. Wirtz (MF)) and the members' assembly.

Research

According to its central tasks and aims, ECI functions as a platform for innovative research ideas to initiate new collaborative applications for extramural research grants. Scientists of the ECI are currently involved in multiple research projects including two ongoing collaborative research centers (SFB 1181, SFB/TRR 130), several research training groups (GK 1660, GK within SFB 1181) at the FAU as well as in the application for two further research training groups (GK 2504/1: „Novel antiviral approaches: from small molecules to immune intervention“ [designated speaker: Prof. Dr. K. Überla; successful evaluation of the full proposal on December 10, 2018]; GK 2559/1: “ImmunoMicroTope: Microenvironmental, metabolic, and microbial signals regulating immune cell-pathogen interactions“ [designated speaker: Prof. Dr. C. Bogdan; full application in preparation]). The initiation of new research consortia in the area of infectious diseases and microbial pathogenesis at the FAU remains the primary goal of the ECI.

Teaching

The researchers of the ECI participate in a number of courses for students as well as in research seminar series. These include not only the interdisciplinary infectious disease and immunology course for medical students (Q4 series) and master students in “Cell and Molecular Biology” or “Integrated Immunology”, but also the invitation of national and international infectious disease researchers for guest lectures.

Selected lectures

10.1.2019 Prof. Dr. F. Wagenlehner, Universitätsklinikum Giessen und Marburg GmbH, Justus-Liebig Universität Giessen
Urinary tract infections with multi-resistant pathogens: Therapeutic alternatives

23.11.2018 Prof. Dr. E.Schnettler, Molecular Entomology, Bernhard-Nocht-Institute for Tropical Medicine, Hamburg
Arbovirus-mosquito interaction

15.10.2018 Dr. Yi. Kai Chan, Department of Genetics, Harvard Medical School and Wyss Institute for Biologically Inspired Engineering Harvard University, Boston: USA
Engineering the innate immune response to viruses

9.7.2018 Prof. S. Kent, Department of Microbiology and Immunology, Peter Doherty Institute, University of Melbourne: Australia
Immunity to HIV – role of ADCC

22.6.2018 Prof. R. Sarid, The Mina and Everard Goodman Faculty of Life Sciences, Bar-Ilan University, Ramat-Gan: Israel
Insights into the biology of KSHV

19.3.2018 Prof. B. R. Cullen, Department of Molecular Genetics and Microbiology, Duke University, Durham: USA
Viral epitranscriptomics

24.11.2017 Prof. Dr. B. Horsthemke, Institut für Human-genetik, Universitätsklinikum Essen
Whole genome bisulfite sequencing in human monocytes and macrophages: The role of allele-specific and celltype-specific DNA methylation

20.10.2017 Dr. K. Sutter, Institut für Virologie, Universitätsklinikum Essen
Individual antiviral and immunomodulatory properties of IFNalpha subtypes during retroviral infections

18.7.2017 Prof. B. Linz, University of Georgia, Center for Vaccine and Immunology College of Veterinary Medicine, Athens, Georgia: USA
Evolution of Bordetella: From environmental bacteria to human pathogens

5.7.2017 Prof. Dr. Dr. A. Sing, Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit (LGL)
Diphtherie – ein Fall fürs Museum? Aktuelles zur Diphtherie in Deutschland

