

## Overview

The innate immune system plays a central role in the defense against microorganisms and in inflammatory processes. Focus of the **KFO 249 "Defects of the innate immune system in autoinflammatory and autoimmune diseases"** is the identification of new pathophysiological mechanisms of disorders associated with abnormalities of the innate immune system. The investigated phenotypic spectrum includes periodic fever syndromes, cutaneous and systemic forms of lupus erythematosus and Aicardi-Goutières syndrome, an autoimmune encephalopathy. The genetic changes associated with these diseases point to previously unknown pathogenic mechanisms within the innate immune system. On the basis of genetically defined autoinflammatory and autoimmune diseases, we investigate the consequences of perturbations in pathways related to inflammasome formation and nucleic acid metabolism at the molecular and cellular level as well as in animal models and in patients. Our goal is to provide novel insights into the molecular pathogenesis of defects of the innate immune system and to facilitate the translation of basic research findings into clinically relevant concepts.

Autoimmunity often leads to chronic disease progression, and modern therapy is frequently cost-intensive and associated to adverse drug reactions. The etiology of many systemic autoimmune diseases is only incompletely understood. The **KFO 250 "Genetic and cellular mechanisms of autoimmune diseases"** investigates families with accumulating autoimmune diseases, well characterised patient cohorts and novel animal models in order to delineate the genetic and cellular mechanisms of systemic and organ-specific autoimmune diseases. The research is supported by the KFO 250 Biobank, which systematically collects data and biomaterials of patients with autoimmune diseases. Cutting-edge technologies are used for DNA sequencing, epigenetic characterisation and *in vivo* life cell imaging. We develop new animal models and search for individual biomarkers in autoimmune diseases with inflammation in the skin, the joints, the liver and other organs. Both physicians and basic scientists collaborate to better understand the disturbed immune system in patients with autoimmunity. Our goal is to improve the diagnostics of autoimmune diseases and to find novel targets for drug intervention.

The goal of this symposium is to bring together scientists with different areas of expertise, to provide an overview of recent developments in their fields and to foster an intensive exchange of experiences.

## Program

### Thursday, 26th September 2013

- |               |                                                                                                                                                           |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12:00 – 13:00 | Registration                                                                                                                                              |
| 13:00 – 13:10 | Welcome by A. Rösen-Wolff, M. Lee-Kirsch, R. Schmidt, G. Behrens                                                                                          |
| 13:10 – 13:30 | Angela Rösen-Wolff: Caspase-1-associated defects of DAMP-recognition                                                                                      |
| 13:30 – 13:50 | Sigrun Hofmann / Michael Heymann: Influence of enzymatically inactive procaspase-1 variants on the interaction with receptor interacting protein 2 (RIP2) |
| 13:50 – 14:10 | Georg Behrens: Autophagy in antigen presentation and autoimmune disease                                                                                   |
| 14:10 – 14:30 | Tilmann Schober: Genetic dysfunction in immunoregulation                                                                                                  |
| 14:30 – 14:50 | Matthias Lochner: Epigenetic and functional characterization of Th17/Treg cell populations                                                                |
| 14:50 – 15:30 | Coffee break                                                                                                                                              |
| 15:30 – 15:50 | Min Ae Lee-Kirsch: Aicardi-Goutières syndrome: A model disease for systemic autoimmunity                                                                  |
| 15:50 – 16:10 | Axel Roers: Mouse models for Aicardi-Goutières syndrome: Pathology induced by defects of intracellular nucleases                                          |
| 16:10 – 16:30 | Claudia Günther: Impact of mutations in TREX1 or RNaseH2 on the pathogenesis of cutaneous autoimmune diseases                                             |
| 16:30 – 16:50 | Thomas Werfel: Autoreactive T-lymphocytes with atopic dermatitis                                                                                          |
| 16:50 – 17:10 | Ulrike Raap: Effector functions of eosinophil and basophil granulocytes and anti-FcεRIa autoantibodies with bullous pemphigoid                            |

### Friday, 27th September 2013

- |               |                                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------|
| 9:00 – 9:20   | Torsten Witte: Leukocyte immunoglobulin-like receptors as risk factors for autoimmune disorders         |
| 9:20 – 9:40   | Leandros Moschovakis: The role of follicular helper T-cells in the pathogenesis of rheumatoid arthritis |
| 9:40 – 10:00  | Richard Taubert: Immunoregulation in autoimmune hepatitis                                               |
| 10:00 – 10:40 | Coffee break                                                                                            |
| 10:40 – 11:00 | Ursula Berka: Retro-viral determinants for innate sensing by plasmacytoid dendritic cells               |
| 11:00 – 11:20 | Marc Gentzel: Quantitative proteomic analysis of cellular secretomes                                    |
| 11:20 – 11:40 | Wolfgang Staroske: Fluorescence-correlation-spectroscopy - intracellular protein interactions           |
| 11:40 – 11:50 | Closing remarks, end of symposium                                                                       |

## Further information

Further information about both clinical research groups as well as the final program will be available at the following websites:

<http://www.kfo249dresden.de>  
<http://www.mh-hannover.de/kfo250.html>

Participating physicians can receive 5 continuing medical education (CME) credits for the first day and 3 CME credits for the second day. Please remember to bring your barcode labels.

## Accommodation

In the following hotels rooms are available at favourable prices:

InterCityHotel Dresden  
Wiener Platz 8, 01069 Dresden  
Phone: +49-351-263550  
www.intercityhotel.com

Motel One Dresden Palaisplatz  
Palaisplatz 1, 01097 Dresden  
Phone: +49-351-6557380  
www.motel-one.com

## Organizers

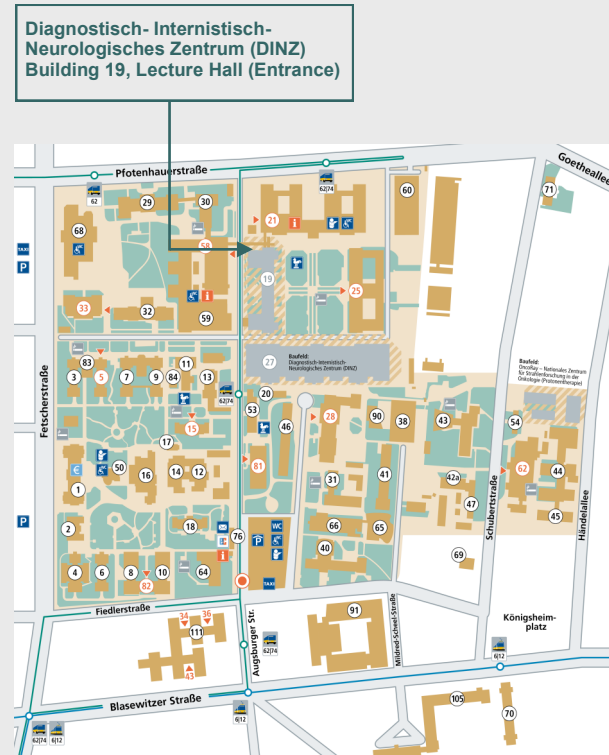
Prof. Dr. med. Angela Rösen-Wolff  
Sprecherin der Klinischen Forschergruppe 249  
Klinik und Poliklinik für Kinder- und Jugendmedizin  
Universitätsklinikum Carl Gustav Carus  
Technische Universität Dresden

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Prof. Dr. med. Georg Behrens  
Leiter der Klinischen Forschergruppe 250  
Klinik für Immunologie und Rheumatologie  
Medizinische Hochschule Hannover

## How to find us



Map of the TU Dresden Medical Campus.

## Contact

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# KFO 249

Klinische Forschergruppe  
Defekte des angeborenen Immunsystems  
bei Autoinflammation und Autoimmunität



Joint Symposium  
KFO 249 and KFO 250

## „Autoinflammation and Autoimmunity“

September 26 - 27, 2013  
Dresden, Germany



Foto: Thomas Albrecht, UWC

## Venue

Universitätsklinikum Carl Gustav Carus  
Diagnostisch-Internistisch-Neurologisches Zentrum (DINZ)  
Building 19, Lecture Hall  
Fetscherstrasse 74, 01307 Dresden, Germany

