

#### Conference organizers:

Professor Dr. Barbara M. Bröker  
Professor Dr. Bärbel Friedrich  
Professor Dr. Sven Hammerschmidt  
Professor Dr. Michael Hecker  
Professor Dr. Ivo Steinmetz  
Professor Dr. Uwe Völker

#### Conference venue:

Alfried Krupp Wissenschaftskolleg Greifswald  
Martin-Luther-Straße 14  
17489 Greifswald

#### Information:

*Alfried Krupp Wissenschaftskolleg Greifswald*  
Graduate School „Functional Genomics of Pathogens“  
Alfried Krupp Wissenschaftskolleg Greifswald  
Martin-Luther-Straße 14  
17489 Greifswald

Dr. Rainer Cramm  
Phone: +49 (0) 3834 / 8619021  
Fax: +49 (0) 3834 / 8619005  
E-mail: rainer.cramm@wiko-greifswald.de

*SFB/Transregio 34*  
Ernst-Moritz-Arndt-Universität Greifswald  
Institut für Mikrobiologie  
Friedrich-Ludwig-Jahn-Str. 15  
17487 Greifswald

Katrin Stark  
Phone: +49 (0) 3834 / 864197  
Fax: +49 (0) 3834 / 864202  
E-mail: stark@uni-greifswald.de

*Research Training Group 840*  
Ernst-Moritz-Arndt-Universität Greifswald  
Medical Faculty, Department of Immunology  
Fleischmannstr. 42-44  
17487 Greifswald

Dr. Maja Richert  
Phone: +49 (0) 3834 / 865468  
Fax: +49 (0) 3834 / 865490  
E-mail: grako.koordination@uni-greifswald.de

Alfried Krupp Wissenschaftskolleg Greifswald  
Martin-Luther-Straße 14  
17489 Greifswald  
info@wiko-greifswald.de  
www.wiko-greifswald.de

## Thursday, June 3

- 8.30 – 9.00  
**Cell autonomous control of inflammasome/ Interleukin-beta activation via PAI-2**  
Herrmann Wagner (Greifswald/München)
- 9.00 – 9.30  
**B cell memory**  
Rudolf Manz (Berlin)
- 9.30 – 10.00  
**Oxidation-specific epitopes are major targets of natural IgM antibodies**  
Christoph Binder (Wien)
- 10.00 – 10.30  
**Antibody glycosylation**  
Falk Nimmerjahn (Erlangen)
- 10.30 – 10.45  
**Advantage of upregulation of succinate dehydrogenase in *Staphylococcus aureus* biofilms**  
Rosmarie Gaupp (Tübingen)
- 10.45 – 11.00  
**New aspects of *Staphylococcus aureus* adhesins Eap and Emp in staphylococcal infections**  
Vanessa Heitmann (Münster)
- 11.00 – 11.30  
*Coffee break*
- 11.30 – 11.45  
**Immunological consequences of ischemic stroke**  
Antje Vogelgesang (Greifswald)
- 11.45 – 12.00  
**Effects of subdiaphragmatic vagotomy on intestinal morphology and T-cell populations in spleen and colonic lamina propria in a polymicrobial murine sepsis model**  
Michael Nielson (Greifswald)
- 12.00 – 12.30  
**Development of Foxp3+ regulatory T cells: epigenetics and more**  
Jochen Hühn (Braunschweig)
- 12.30 – 13.00  
**Innate immune responses at the intestinal mucosa**  
Kiyoshi Takeda (Osaka)
- 13.00 – 13.30  
**The role played by T-cells during *Staphylococcus aureus* infection**  
Rachel McLoughlin (Dublin)
- 13.30 – 14.00  
**Immunosuppression after polymicrobial sepsis: the role of dendritic cells**  
Stefanie Flohé (Essen)
- 14.00 – 15.30  
*Lunch*

## Alfried Krupp Wissenschaftskolleg Greifswald

The Alfried Krupp Wissenschaftskolleg is an academically independent institution sponsored by the Stiftung Alfried Krupp Kolleg Greifswald. The initiative to establish the Alfried Krupp Wissenschaftskolleg came from the Chairman of the Board of Trustees of the Alfried Krupp von Bohlen und Halbach-Stiftung, Professor Dr. h. c. mult. Berthold Beitz. The academic programme of the Alfried Krupp Wissenschaftskolleg is made possible by financial support provided by the Alfried Krupp von Bohlen und Halbach-Stiftung.

## SFB/Transregio 34

The SFB/Transregio 34 is a joint cooperation of the universities of Greifswald, Tübingen, and Würzburg. The aim of this research project is to draw fundamental conclusions about cell physiology and infection biology of *Staphylococcus aureus* by functional genomics approaches. The work will provide a framework for a better control of staphylococcal infections.

## Research Training Group 840

The Research Training Group 840 is a research training programme at the University of Greifswald. 15–20 PhD- and MD-students work on their theses within the framework of a coherent research programme focussed on “Host-pathogen interactions in generalized bacterial infections”. The interdisciplinary team of the 18 faculty members, who supervise the individual thesis projects, is from the Faculty of Medicine and from the Faculty of Sciences.



# Host-pathogen interactions in bacterial infections

Jointly organized by

The **Research Training Group 840** „Host-Pathogen Interactions in Generalized Bacterial Infections“

The **SFB/Transregio 34** „Pathophysiology of Staphylococci in the Post-Genomic Era“

The **Alfried Krupp Graduate School** „Functional Genomics of Pathogens“

May 31–June 3, 2010

## Monday, May 31

### Graduate students' pre-meeting

- 14.00 – 14.15  
Characterisation of the response of *Staphylococcus aureus* to the host cell environment via Multiple Reaction Monitoring (MRM)  
Kristin Surmann (Greifswald)
- 14.15 – 14.30  
Host-pathogen interactions – what we learn from staphylococcal superantigens  
Dorothee Grumann (Greifswald)
- 14.30 – 14.45  
Physiological characterisation of *Staphylococcus aureus* in vivo  
Leonhard Menschner (Greifswald)
- 14.45 – 15.00  
Platelet interaction with bacteria: role of platelet membrane transport proteins?  
Yvonne Schaletzki (Greifswald)
- 15.00 – 15.15  
Structural analysis of new low molecular weight thiol compounds in Staphylococci by hyphenated chromatography/mass spectrometry and NMR  
Manuel Liebeke (Greifswald)
- 15.15 – 15.45  
*Coffee break*
- 15.45 – 16.00  
Characterization of colibactin, a novel bioactive polyketide of pathogenic and non-pathogenic *Escherichia coli*  
David Wagner (Berlin)
- 16.00 – 16.15  
Metabolism of glycated proteins in *Escherichia coli*  
Chen Katz (Tel Aviv)
- 16.15 – 16.30  
Multiple Crp/Fnr putative regulatory proteins in *Listeria monocytogenes*  
Keren Tadmor (Tel Aviv)
- 16.30 – 16.45  
Molecular mechanisms for distribution, persistence and virulence of *Legionella*  
Nina Köhler (Berlin)
- 16.45 – 17.00  
The intestinal microbiota in a murine model of colon cancer  
Itay Amir (Tel Aviv)
- 17.00 – 17.30  
*Coffee break*
- 17.30 – 18.00  
*Graduate student roundtable*  
Progress report and organizational topics

### Conference opening

- 18.30 – 18.45  
*Welcome addresses:*  
Christian Suhm (academic manager of the Alfried Krupp Wissenschaftskolleg Greifswald)  
Barbara Bröker (conference organizing committee)
- 18.45 – 19.30  
*Staphylococcus aureus* infection:  $\alpha$ -hemolysin at the cutting edge  
Julie Wardenburg (Chicago)
- 19.30 – 20.15  
Host-pathogen interaction in the urinary tract: Does the host imprint on bacterial genomes?  
Ulrich Dobrindt (Würzburg)
- 20.15 – 22.00  
*Welcome reception*

## Tuesday, June 1

- 8.30 – 9.00  
Signaling, survival and pathogenesis of *Staphylococcus aureus*  
Tarek Msadek (Paris)
- 9.00 – 9.30  
The unique case of *Listeria monocytogenes* EGD-e when grown under low oxygen or anaerobic conditions  
Yair Aharonowitz (Tel Aviv)
- 9.30 – 10.00  
Modulation of transcript stability as a control element during stress  
Eliora Ron (Tel Aviv)
- 10.00 – 10.15  
Structural analysis of new low molecular weight thiol compounds in Staphylococci by hyphenated chromatography/mass spectrometry and NMR  
Manuel Liebeke (Greifswald)
- 10.15 – 10.30  
Time resolved quantitative proteome profiling of host-pathogen interactions: The response of *Staphylococcus aureus* to internalization by human airway epithelial cells  
Sandra Scharf (Greifswald)
- 10.30 – 11.00  
*Coffee break*
- 11.00 – 11.15  
A proteomic signature library of *Staphylococcus aureus*  
Stephan Fuchs (Greifswald)
- 11.15 – 11.30  
Strongly elevated *sae* transcription in response to sub-inhibitory SDS treatment in clinical MRSA isolate ST239-635/93 (EMRSA SCCmec III)  
Edward Makgotlho (Würzburg)

- 11.30 – 12.00  
Intelligent survival strategies adopted by *Mycobacterium tuberculosis*  
Seyed E. Hasnain (Hyderabad)
- 12.00 – 12.30  
Innate immune evasion by Staphylococci  
Jos A.G. van Strijp (Utrecht)
- 12.30 – 13.00  
Ectonucleotidases of CD39 and CD73 families  
Simon C. Robson (Boston)
- 13.00 – 14.30  
*Lunch break*
- 14.30 – 15.00  
*Staphylococcus aureus* molecular epidemiology  
Wolfgang Witte (Wernigerode)
- 15.00 – 15.30  
*Staphylococcus aureus* ST 398  
Georg Peters (Münster)
- 15.30 – 16.00  
Functional genomics of *Staphylococcus aureus*  
Jacques Schrenzel (Geneva)
- 16.00 – 16.30  
*Staphylococcus aureus* colonization  
Alex van Belkum (Rotterdam)
- 16.30 – 17.00  
*Coffee break*
- 17.00 – 17.30  
The staphylococcal sugar toppings – roles of teichoic acids in colonization and infection  
Andreas Peschel (Tübingen)
- 17.30 – 18.00  
*Listeria monocytogenes* MDR transporters as modulators of innate immune responses  
Anat Herskovits (Tel Aviv)
- 18.00 – 18.30  
*Staphylococcus aureus* adherence and invasion  
Bhanu Sinha (Würzburg)
- 18.30 – 19.00  
*Staphylococcus aureus* lipoproteins  
Fritz Götz (Tübingen)
- 20.00  
*Conference dinner*

## Wednesday, June 2

- 8.30 – 9.00  
*Staphylococcus aureus* protein sorting  
Jan Maarten Van Dijk (Groningen)
- 9.00 – 9.30  
Epidemiology of Panton-Valentine leukocidin  
Gerard Lina (Lyon)

- 9.30 – 10.00  
PVL, molecular mechanisms  
Bettina Löffler (Münster)
- 10.00 – 10.15  
Characterization of the “black box” between a stimulus and the adapted proteome signature: Anaerobic signal transduction and modulon architecture of the redox-sensing repressor Rex in *Staphylococcus aureus*  
Martin Pagels (Greifswald)
- 10.15 – 10.30  
Heparin-induced thrombocytopenia: a misdirected host defense mechanism  
Krystin Krauel (Greifswald)
- 10.30 – 11.00  
*Coffee break*
- 11.00 – 11.15  
Host-pathogen interactions – what we learn from staphylococcal superantigens  
Dorothee Grumann (Greifswald)
- 11.15 – 11.30  
The human antibody response to *Staphylococcus aureus* bacteraemia  
Julia Kolata (Greifswald)
- 11.30 – 12.00  
Phenol-soluble modulators  
Michael Otto (Bethesda)
- 12.00 – 12.30  
The mammalian gut microbiota – conservation and variation  
Uri Gophna (Tel Aviv)
- 12.30 – 13.00  
Antibacterial defensins  
Hans Sahl (Bonn)
- 13.00 – 14.30  
*Lunch break*
- 14.30 – 17.00  
*Poster presentation*
- 17.00 – 17.30  
Animal models of *Staphylococcus aureus* infection  
Knut Ohlsen (Würzburg)
- 17.30 – 18.00  
Intravital two-photon microscopy of *Staphylococcus aureus* infections  
Jan Liese (New York)
- 20.00  
*Dinner (Seaside Barbecue)*