



TRR 83 Transregional Collaborative Research Centre 83
Heidelberg - Bonn - Dresden
Molecular Architecture and Cellular Functions of
Lipid/Protein Assemblies

International SFB/Transregio 83 Symposium

Molecular Architecture and Cellular Functions of Lipid/Protein Assemblies

Heidelberg, October 18 – 20, 2012

Program

Scientific Organizers:

**Britta Brügger
Thomas Söllner**

Venue

BioQuant Center
Lecture Hall 41, Ground Floor
Im Neuenheimer Feld 267
Ruprecht-Karls-Universität Heidelberg
69120 Heidelberg

Participation in the meeting is free of charge

We gratefully acknowledge support by:



Thursday – October 18, 2012

Session I: Lipid – Transmembrane Domain Interactions

- 9.30 – 9.40 a.m. **Welcome**
- 9.40 – 10.25 a.m. **Energies and forces during membrane protein assembly**
Gunnar von Heijne
Stockholm University, Sweden
- 10.25 – 11.10 a.m. **A specific interaction of p24 with a sphingolipid**
Britta Brügger
Heidelberg University, Germany
- 11.10 – 11.55 a.m. **Model transmembrane peptides: from basic design towards function**
Antoinette Killian
Utrecht University, The Netherlands
- 11.55 – 1.15 p.m. *Lunch*
- 1.15 – 2.00 p.m. **Role of lipids in structure and function of respiratory complexes**
Carola Hunte
University of Freiburg, Germany

Session II: State of the Art Methods in Membrane Biology, Part I

- 2.00 – 2.45 p.m. **Nanoscopy with focused light**
Stefan W. Hell
Max Planck Institute for Biophysical Chemistry Göttingen, Germany
- 2.45 – 3.30 p.m. **Protein-induced membrane reorganization observed in solid supported and freestanding lipid bilayers**
Claudia Steinem
University of Göttingen, Germany
- 3.30 – 4.00 p.m. *Coffee break and poster session*

Session III: Intracellular Organelles and Diseases

- 4.00 – 4.45 p.m. **Cholesterol trafficking in sickness and in health**
Elina Ikonen
University of Helsinki, Finland
- 4.45 – 5.30 p.m. **Control of mitochondrial apoptosis by a putative ceramide sensor in the ER**
Joost Holthuis
University of Osnabrueck, Germany
- 5.30 – 6.15 p.m. **Lipid droplets and neutral lipid synthesis**
Christoph Thiele
University of Bonn, Germany
- 7.00 p.m. *Dinner (Guest speakers and TRR83 project leaders only)*

Friday – October 19, 2012

Session IV: Intracellular Organelles and Diseases

- 9.30 – 10.15 a.m. **Membrane lipids regulate endolysosomal sphingomyelin degradation required for cholesterol export by NPC₂.**
Konrad Sandhoff
University of Bonn, Germany
- 10.15 – 11.00 a.m. **Transcriptional regulation of cellular clearance and energy metabolism**
Andrea Ballabio
Telethon Institute of Genetics and Medicine Naples, Italy
- 11.00 – 11.20 a.m. *Coffee break and poster session*
- 11.20 – 12.05 p.m. **Intramitochondrial phospholipid trafficking**
Thomas Langer
University of Cologne, Germany

Session V: State of the Art Methods in Membrane Biology, Part II

- 12.05 – 12.50 p.m. **Tools for manipulating membrane signaling**
Carsten Schultz
EMBL Heidelberg, Germany
- 12.50 – 1.45 p.m. *Lunch*
- 1.45 – 2.30 p.m. **Tissue Imaging of Lipids by Mass Spectrometry**
Robert C. Murphy
University of Colorado Denver, USA
- 2.30 – 3.15 p.m. **Mechanistic analysis of Osh/Orp proteins**
Guillaume Drin
Institut de Pharmacologie Moléculaire et Cellulaire, Valbonne, France
- 3.15 – 3.45 p.m. *Coffee break and poster session*

Session VI: Virus Assembly and Trafficking

- 3.45 – 4.30 p.m. **Trafficking in cells - through the 'eyes' of a virus**
Urs Greber
University of Zürich, Switzerland
- 4.30 – 5.15 p.m. **Studies of the hepatitis C virus replication cycle: a tale of proteins and lipids**
Ralf Bartenschlager
University Hospital Heidelberg, Germany
- 5.15 – 5.30 p.m. *Coffee break and poster session*
- 5.30 – 6.15 p.m. **Hijacking of host cell trafficking by the HIV-1 pathogenesis factor Nef**
Oliver Fackler
University Hospital Heidelberg, Germany

- 6.15 – 7.15 p.m. **Plenary lecture: The exciting coexistence of lipids and proteins**
Kai Simons
Max Planck Institute for Molecular Cell Biology and Genetics Dresden,
Germany

- 7.30 p.m. *Dinner (Guest speakers and TRR83 members only)*

Saturday – October 20, 2012

Session VII:

Vesicle Budding and Fusion

- 9.00 – 9.45 a.m. **Reconstitution of Ca²⁺-triggered membrane fusion**
Thomas Söllner
Heidelberg University Biochemistry Center, Germany
- 9.45 – 10.30 a.m. **How membrane shape changes, guided by proteins, participate in biological reactions**
Harvey McMahon
Medical Research Council Cambridge, UK
- 10.30 – 11.15 a.m. **A novel lipid in endocytosis**
Volker Haucke
Leibniz Institut für Molekulare Pharmakologie Berlin, Germany
- 11.15 – 11.45 a.m. *Light meal*
- 11.45 – 12.30 p.m. **How proteins motivate lipids**
Joshua Zimmerberg
NICHD, Bethesda, USA
- 12.30 – 1.15 p.m. **Lateral diffusion in membranes crowded with proteins**
Ilpo Vattulainen
Tampere University of Technology, Finland
- 1.15– 1.30 p.m. *Concluding remarks and general assembly of TRR83 project leaders*