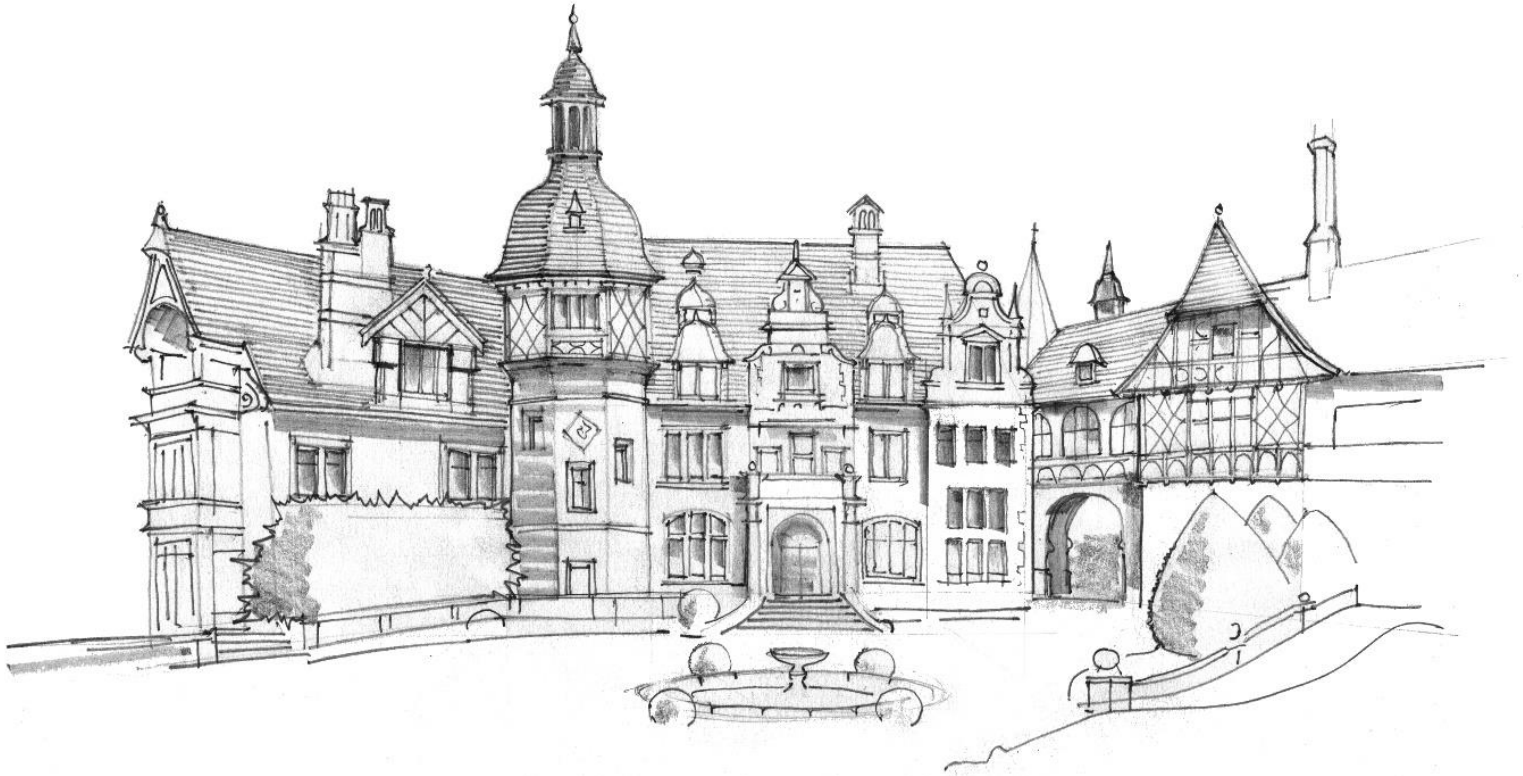


Program



13th Transport Colloquium

April 24-26, 2024

Schloss Rauschholzhausen, Germany

Organizers

Eckhard Hofmann (Bochum)

Eric Geertsma (Dresden)

Joachim Geyer (Gießen)

The biennial meeting of the
GBM study group BIOMEMBRANES

Kindly supported by:



Wednesday, April 24th

15:00 **Registration**

16:30 **Welcome**

16:45 **Session I: Drug transport and transporters as drug targets**

Session Chair: Jörg König

Grit Zahn SLC13A5 and its role in the regulation of citrate metabolism and citrate related diseases

Sven Marcel Stefan Discovery of Energy-coupling Factor Transporter (ECFT) Inhibitors as Novel Antibiotics Using Strategic Polypharmacology

Mariafrancesca Scalise The cystine/glutamate antiporter SLC7A11 (xCT): functional characterization from in vitro proteoliposomes to lung cancer model

Susana Andrade When ammonium transporters become receptors

Sarah Römer Mechanisms of OCT1 Polyspecificity: A Functional Analysis Guided by Recent Cryo-EM Structures

19:00 **Dinner**

20:00 **After dinner speech**

Lutz Schmitt The yeast ABC transporter Pdr5 - a story of substrates and surprises

Thursday, April 25th

08:15 **Session II: Role of lipids in lipid transport**

Session Chair: Maria Fedorova

Claudia Matthäus Novel insights in caveolae curvature and trafficking

Ünal Coskun Direct regulation of receptor transmembrane signaling by lipid-protein interactions

Veronika Osten Lipids modulate the activity of the bacterial ABC Transporter BmrA

Lea Hoffmann Cryo-EM analyses of the conformational spectrum of an ABC transporter in various membrane mimics

Katrin Debrich Intramembrane crowding affects the stability of a transmembrane helix dimer

10:30 **Coffee break**

11:00 **Session III: Structural basis for membrane transport**

Session Chair: Inga Hänel

- Cristina Paulino Think like a channel, act like a carrier
- Schara Safarian Being careful what to wish for: a tale of heme and choline
- Victor Perez Carrillo A conserved communication hinge is responsible for allosteric interdomain crosstalk and function in a multidrug ABC transporter
- Fernando Ormeno Molecular Determinants in *Archaeoglobus fulgidus* Amt2: GlnK2 complex formation
- Jagdeep Kaur Understanding conformational dynamics of LptC and LptB2FGC in different states of LPS translocation using solid-state NMR

13:15 **Lunch**

14:15 **Session IV: Computational simulations of membrane transporters**

Session Chair: Eckhard Hofmann

- Lars Schäfer Caught in the Act: Molecular Dynamics Simulations of Membrane Transporters
- Till Rudack Structure prediction and integrative Modeling Strategies for Membrane Transporters
- Christian Löw MFSD1 in complex with its accessory subunit GLMP functions as a general dipeptide uniporter in lysosomes
- Kerby Chok Probing dynamics of the ABC transporter MsbA with optical controlled liposomes by MAS-NMR spectroscopy
- Matija Pečak Conformational changes of a heterodimeric ABC transporter visualized on a single-molecule level

16:30 **Meeting of the GBM study group "Biomembranes" / Coffee break**

17:15 **Session II: Substrate and inhibitor binding to membrane carriers**

Session Chair: Verena Taudte

- Julian Langer Analysing conformational changes and binding sites in transporters using HDX-MS
- Charlotte Kölz Generation and characterization of novel mouse models for OAT2 and OAT7 located in the sinusoidal membrane of hepatocytes
- Marie Wannowius Structure-activity relationships and target selectivity of phenylsulfonamino-benzanilide inhibitors at the SLC10 carriers NTCP, ASBT, and SOAT
- Daniela Surrer Organic anion transporting polypeptide (OATP) 3A1 mediates uptake of aromatic amino acids L-tryptophan, L-tyrosine and L-phenylalanine

19:00 Dinner

20:00 Poster Session

Friday, April 26th

9:00 Session VI: Cell biology of membrane transporters

Session Chair: Eric Geertsma

Alexander von Appen	Mechanisms of nuclear membrane assembly
Sonja-Verena Albers	The archaellum, the motility machinery of Archaea
Michele Visentin	S-acylation of renal membrane transporters
Bayram Edemir	Epigenetic modification control spatial gene expression pattern of transporters
Sophie Achilles	Extra- and intracellular tagging of DRA (SLC26A3) allows characterization of its trafficking through the cell to the plasma membrane including plasma membrane associated lipid rafts
Pia Briger	Membrane Remodeling and Curvature Induction by a Small Transmembrane Protein

12:00 Poster Prize, Concluding Remarks

12:15 Snack and Departure