



IRTG Retreat 2024

Youth hostel DJH Dortmund

21 to 23 October 2024

Table of Contents

Program3

Poster Index7

Talk Abstracts8

Session I9

Session II12

Session III17

Session IV21

Session V26

Session VI29

Session VII33

Poster Abstracts37

Poster Session I38

Poster Session II48

Program

Monday, 21 October 2024

08:49 – 09:22	Train from Osnabrück to Münster (RE2)
09:34 – 10:27	Train from Münster to Dortmund (RB50)
10:30 – 11:15	Walk to <i>Youth hostel DJH Dortmund</i> & Registration
11:15 – 11:30	Opening Remarks
Session I	(Session Chair: Nadia Füllbrunn)
11:30 – 11:50	Denisa Jamecna (Chemical Biology of Membranes): <i>Stard3 transports sphingosine at lysosome-ER contact sites</i>
11:50 – 12:10	Lena Tveriakhina : <i>Visualization and Characterization of Notch Signaling Dynamics</i>
12:10 – 12:30	Dmitry Shvarev (Structural Biology of Photosynthetic Microorganisms): <i>Multiprotein Complexes Governing Chlorophyll Biosynthesis</i>
12:30 – 13:30	Lunch
Session II	(Session Chair: Nadine Gehle)
13:30 – 14:10	Keynote: Kathrin Thedieck (University Duisburg-Essen): <i>New metabolic signals to mTOR at lysosomes</i>
14:10 – 14:30	Frederik Brinks (Biochemistry): <i>Control of phosphatidylinositol levels on endosomes and vacuole</i>
14:30 – 14:50	Annabel Arens (Biochemistry): <i>Vac7- a regulator of Fab1 activity</i>
14:50 – 15:10	Coffee Break
15:10 – 15:30	Verena Wolf (Bioanalytical Chemistry): <i>Determining the Effect of Membrane Composition on the Activity of Yeast Serine Palmitoyl-Transferase</i>
15:30 – 15:50	Aniket Bandyopadhyay (Cell Dynamics and Imaging): <i>Adaptation of Plasma Membrane ATPase1 to metabolic stress</i>
15:50 – 16:10	Flash Poster Presentations I
16:10 – 17:50	Poster Session I
17:50 – 18:30	Meet the Speaker with Marianne Grognot and Kathrin Thedieck (PhD students only)
18:00 – 19:30	Dinner
20:00	Pub-Quiz (Bistro)

Tuesday, 22 October 2024

06:30 – 9:30	Breakfast
Session III	(Session Chair: Comfort Yeboaa)
8:30 – 9:10	Keynote: Marianne Grognot (RWTH Aachen): <i>The Fast and the Furious: A quantitative dive into the motility of gut bacterial pathogens and commensals</i>
9:10 – 9:30	Shirley Helms (Microbiology): <i>Manipulation of host cell lipidome by translocated effector proteins of intracellular <i>Salmonella enterica</i></i>
9:30 – 9:50	Verena Fritsch (Microbiology): <i>Analysis of translocated T3SS effector protein dynamics and their role in endosomal remodeling by intracellular <i>Salmonella enterica</i></i>
9:50 – 10:10	Anna-Carina Mazur (Host-Microbe Interactome): <i>Manipulation of VAP-mediated membrane contacts by pathogenic mycobacteria</i>
10:10 – 10:30	Coffee Break
Session IV	(Session Chair: Pascal Höhne)
10:30 – 11:10	Keynote: Stefan Raunser (MPI Dortmund): <i>Unlocking the secrets of heart muscle structure</i>
11:10 – 11:30	Kai Jürgens (Zoology and Developmental Biology): <i>A <i>Drosophila</i> model for TMEM43-induced human cardiomyopathies reveals ERMCS involvement</i>
11:30 – 11:50	Lena Clausmeyer (Bioanalytical Chemistry): <i>In vitro characterization of the ceramide synthase in <i>S. cerevisiae</i></i>
11:50 – 12:10	Lea Hoffmann (Structural Biology): <i>Activity and Structural Changes of MsbA upon Interaction with LPS and Precursors</i>
12:10 – 12:30	Stephan Wilmes (Biochemistry and Structural Biology): <i>Structure and Function of Tri-Longin-Domain-Rab GEFs</i>
12:30 – 13:30	Lunch
Session V	(Session Chair: Verena Wolf)
13:30 – 14:10	Keynote: Ralf Erdmann (University Bochum): <i>Biogenesis of Peroxisomes: From Yeast to Man</i>
14:10 – 14:30	Franziska Flottmann (Zoology): <i>Isolating intact lysosomes from <i>Drosophila melanogaster</i></i>
14:30 – 14:50	Christian Schröer (Molecular Cell Biology): <i>A chemical strategy for imaging ER-derived lipid flows to damaged lysosomes</i>
	Coffee Break
14:50 – 15:30	Walk to the City Hall of Dortmund Group photo
15:30 – 17:00	Guided City Tour

17:00 – 17:50	Free time
17:50 – 18:30	Meet the Speaker with Peter Bieling and Thomas Klein (PhD Students only)
18:00 – 19:30	Dinner
19:30	Bistro

Wednesday, 23 October 2024

7:30 – 8:30	Breakfast
Session VI	(Session Chair: Stephan Wilmes)
8:30 – 9:10	Keynote: Thomas Klein (HHU Düsseldorf): <i>Making sense of the tumorsuppressor Lethal (2) giant discs (Lgd) and its interaction partner Shrub/CHMP4</i>
9:10 – 9:30	Sebastian Bieker (Molecular Cell Biology): <i>Unraveling the working mechanism of a tumor suppressor lipid</i>
9:30 – 9:50	Victor Cornily (Animal Physiology): <i>Formation, composition and role of extracellular vesicles in spiny mouse tissues</i>
9:50 – 10:10	Katharina Kott (Molecular Cell Biology): <i>SGMS2 variants linked to skeletal dysplasia disrupt cellular sphingomyelin gradients</i>
10:10 – 10:30	Coffee Break
10:30 – 10:50	Flash Poster Presentations II
10:50 – 12:30	Poster Session II
12:30 – 13:30	Lunch
Session VII	(Session Chair: Louis Percifull)
13:30 – 14:10	Peter Bieling (MPI Dortmund): <i>Mechanistic principles of Rho GTPase patterning</i>
14:10 – 14:30	Arthur Felker (Biophysics): <i>Combining single-molecule FRET and GIET for nanoscopic 3D structural analysis of proteins</i>
14:30 – 14:50	Christoph Pollmann (Biophysics): <i>Mechanism of cytokine receptor activation and dysregulation at single molecule level</i>
14:50 – 15:10	Pascal Höhne (Organelle Communication): <i>Optogenetic manipulation of organelle contact sites</i>
15:10 – 15:30	Closing Remarks & Award Ceremony
15:30 – 16:15	Coffee Break and Walk to Dortmund Train Station
16:35 – 17:26	Train from Dortmund to Münster (RB50)
17:37 – 18:19	Train from Münster to Osnabrück (RE2)

Poster Index

Flash Poster Presentations I 21 October, 15:50		Flash Poster Presentations II 23 October, 10:30	
Elisabeth Südhoff	2	Dekai Dong	15
Angelina Hübner	5	David Dallemer	16
Alischa Scholz	6	Nadia Füllbrunn	19
Lawal S. Olatunde	8		
Jonathan Jansen	10		

Poster Session I 21 October, 16:10		Poster Session II 23 October, 10:50	
Arthur Felker	1	Katharina Kott	11
Elisabeth Südhoff	2	Jasper Eising	12
Christian Schröer	3	Comfort Yeboaa	13
Nada Elagouri	4	Lea Hoffmann	14
Angelina Hübner	5	Dekai Dong	15
Alischa Scholz	6	David Dallemer	16
Jesse Tönjes	7	Nadine Gehle	17
Tunde Lawal	8	Kai Jürgens	18
Louis Percifull	9	Nadia Füllbrunn	19
Jonathan Jansen	10		