DFG

Universität Münster

Dynamic Cellular Interfaces CRC 1348

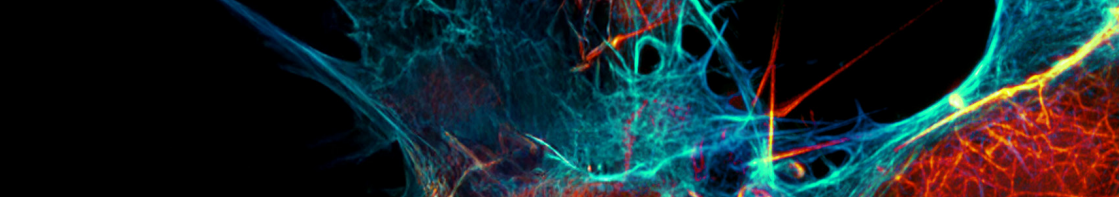
MAY 27 – 29
2026
IN MÜNSTER

PROGRAM

CRC 1348 MEETING

MECHANOCHEMICAL SIGNALS AT CELLULAR INTERFACES

FOLLOW US ON BLUESKY @SFB1348.BSKY.SOCIAL



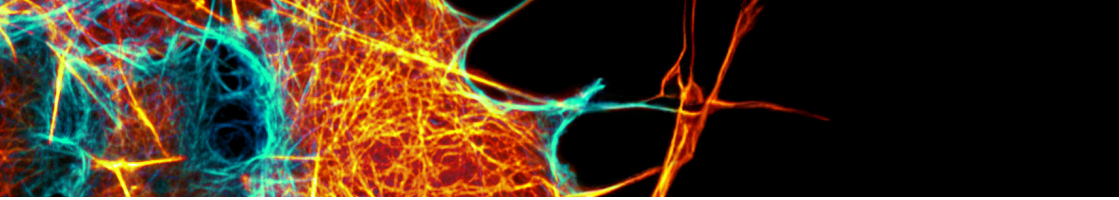
DAY 1: MAY 27, 2026

Session 1: Biophysics of development (Chair: Stefan Luschnig)

13:00 – 13:10	Welcome
13:10 – 13:40	Stephan Grill (MPI Dresden): Mechanics at the nuclear periphery
13:40 – 14:10	Nicoletta Petridou (EMBL Heidelberg): Tissue phase transitions in development: More than just mechanics
14:10 – 14:40	Jakub Sedzinski (University of Copenhagen): Mechanics of basal body patterning during multiciliated cell development
14:40 – 14:50	Short Talk 1: Diana Khoromskaia (University of Münster) Modelling spatio-temporal control of mitotic furrowing
14:50 – 15:00	Short Talk 2: Karthik Kalyankumar (University of Münster) Unraveling the Structural and Mechanistic Basis of α-Latrotoxin Action at the Synapse
15:00 – 15:30	Coffee break

Session 2: In and out of the nucleus (Chair: Kate Miroshnikova)

15:30 – 16:00	Matthieu Piel (Institut Curie, Paris): Water movements in and out of the nucleus
16:00 – 16:30	Abin Biswas (MPI Berlin): Intracelllular density homeostasis
16:30 – 17:00	Jop Kind (Hubrecht Institut, Utrecht): High throughput multiplexed epigenetic profiling in single cells with MAbID
17:00 – 17:10	Short talk 3: Nelly Drobjazko (MPI Münster) Biomechanical control of cell fate transitions
17:10 – 17:20	Short talk 4: Shashank Jaitly (MPI Münster) Immune Tolerance at the Embryo–Maternal Interface
17:20 – 19:30	Posters and Pizza (even numbers)



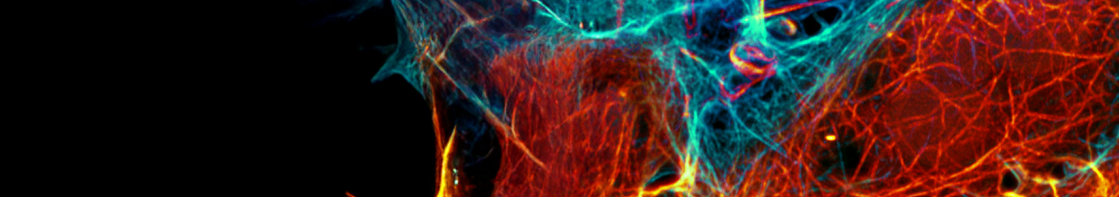
DAY 2: MAY 28, 2026

Session 3: From force sensing to cell fate (Chair: Carsten Grashoff)

09:00 – 09:30	Elisabeth Fischer-Friedrich (TU Dresden): Regulation of plasma membrane tension through hydrostatic pressure and actin protrusion forces
09:30 – 10:00	Timo Betz (Georg-August-Universität Göttingen): Dystrophin as a homeostatic tension regulator in reconstituted muscle tissue
10:00 – 10:30	Rashmi Priya (The Crick Institute, London): Living machines: how to build a functional heart
10:30 – 11:00	Edouard Hannezo (ISTA Klosterneuburg): Emergent mechanism of mechano-sensing and shape sensing
11:00 – 11:10	Short Talk 5: Mauricio Rocha-Martins (University of Münster) From chaos to order: how developing tissues regrow and self-reorganize to repair damage
11:10 – 11:40	Coffee break (30 min)

Session 4: Self-organization in tissue patterning (Chair: Milos Galic)

11:40 – 12:10	Hervé Turlier (CNRS Toulouse): Inverse design of mechanochemical tissue patterning
12:10 – 12:40	Brian Stramer (King‘s College London): Dynamic regulation of extracellular matrix stability during development
12:40 – 13:10	Anna Erzberger (EMBL Heidelberg): Information processing and feedback at cellular interfaces
13:10 – 13:20	Short Talk 6: Maik Bischoff (University of Münster) Coiling a Duct – How Cell Motion Shapes Chiral Organ Architecture
13:20 – 15:30	Posters and lunch (odd numbers)



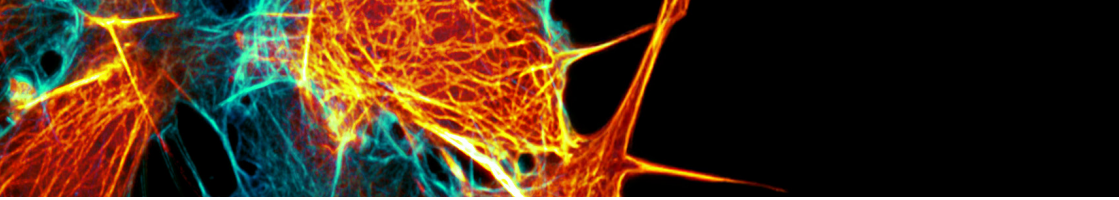
Session 5: Tissue mechanics and scaling (Chair: Mara Pitulescu)

15:30 – 16:00	Morgan Delarue (LAAS-CNRS, Toulouse): Cell biosynthesis under mechanical pressure
16:00 – 16:30	Frank Schnorrer (Institute for Developmental Biology Marseille): Muscle building: the making of a fly steak
16:30 – 17:00	Yohanns Bellaiche (Institut Curie, Paris): Scaling of tissue flow with animal size
17:00 – 17:10	Short talk 7: Dorothee Bornhorst (University of Münster) Not Just 'Lining the Pipes': Endothelial Regulation of Organ Homeostasis

DAY 3: MAY 29, 2026

Session 6: Organoids and disease models (Chair: Sara Wickström)

09:00 – 09:30	Laura Capolupo (Friedrich Miescher Institute for Biomedical Research (FMI), Basel): Villus driven coordination of intestinal crypt morphogenesis
09:30 – 10:00	Katja Röper (University of Cambridge): Mechanisms and mechanics of tube morphogenesis
10:00 – 10:30	Saskia Suijkerbuijk (University of Utrecht): Spatiotemporal regulation of cell competition in intestinal cancer
10:30 – 10:40	Short Talk 8: Stefanie Grosswendt (Max-Delbrück-Centrum für Molekulare Medizin) Uncovering ligand–receptor dialogues between individual cells
10:40 – 10:50	Short Talk 9: Gitanjali (MPI Münster) Elucidating the role of YY1 in type R vessel specialisation and function in long bone
10:50 – 11:20	Coffee break



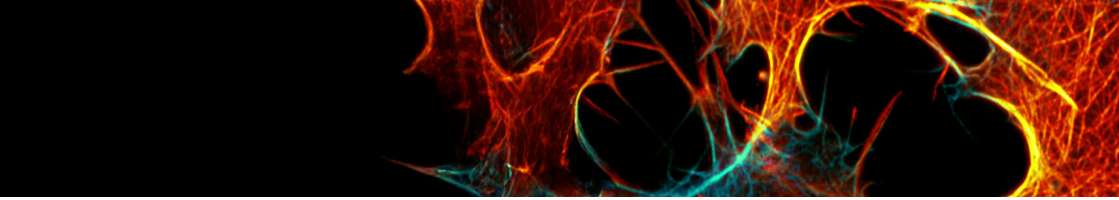
Session 7: Cells on the move (Chair: Tim Lämmermann)

11:20 – 11:50	Diana Pinheiro (Research Institute of Molecular Pathology, Wien): Linking fate and form during vertebrate gastrulation
11:50 – 12:20	Katarina Wolf (Radboud University): Impact of lamin–A/C expression modulation on cancer invasion and metastasis in vivo
12:20 – 12:50	Erik Sahai (The Crick Institute, London): Signalling and spatial patterns at tumour-stroma interfaces
12:50 – 13:00	Conclusion

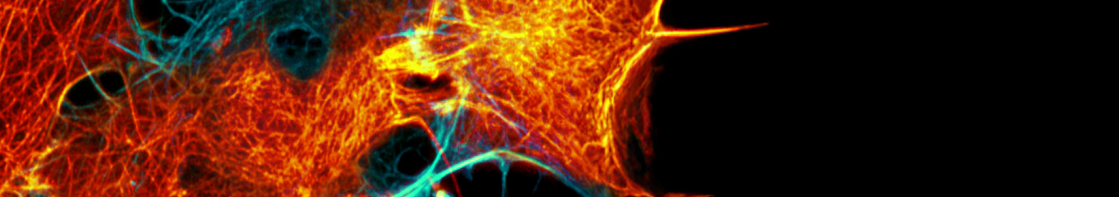
POSTERSESSION

May 27 from 17:20 – 19:30 (even numbers) & May 28 from 13:20 – 15:30 (odd numbers)

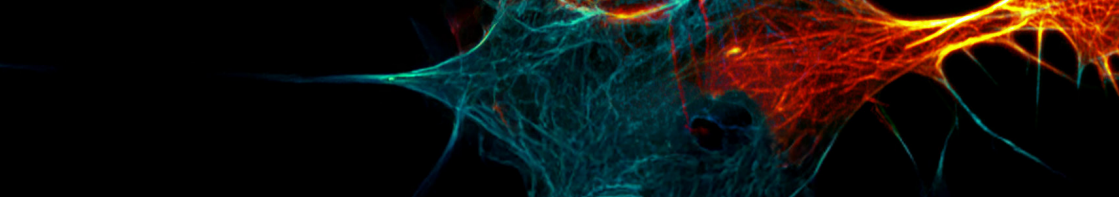
1. Martina Alamo Rollandi (UKE Hamburg): Adenine nucleotides regulates B cell spreading and migration
2. Lucas Anger (CNRS & Université Paris Cité): A principle-stress rule for cell division in epithelia
3. Gina Brüggemann (University of Münster): Structural and functional insights into a novel phosphatidic acid binding site in LKB1
4. Kexin Cai (University of Münster): Light-activated Synthetic Notch Signaling
5. Pauline Chantraine (MPI Münster): Mechanochemical regulation of stem cell fate and plasticity via MAPK pathway activity
6. Ajisha Chathyattu (University of Münster): Targeted nanoscale recruitment of receptors on prepatterned surfaces
7. Cecile Daubech (FAU Erlangen): Dynamics of human epidermal keratinocyte differentiation and delamination
8. Jannik Dietz (University of Münster): Investigating the mechanobiological mechanism of FAK activation



9. Kevin Dilip (University of Münster): Imaging sterol distribution in S. cerevisiae using clickable imidazolium-based analogs
10. Junxiu Duan & Sai Krishnan (University of Münster): Relating structure to function during synaptic vesicle recycling
11. Rebecca Fausten (University of Münster): Spatial reorganization of the ceramide synthase in response to stress
12. Nishita Gattani (MPI Münster): Investigating how compensation to cell loss is coordinated across biological scales in developing zebrafish retina
13. Patrick Günther (TU Dortmund): Vascularization of Human Cortical Organoids in 3D Synthetic Hydrogels
14. Shashank Jaitly (MPI Münster): Embryo-maternal immune tolerance at the impantation site
15. Lea Krüger (University of Münster): Transport through a Curved Epithelium during Patency in Drosophila
16. Beatriz Leite (University of Münster): Functional characterization of the vCLIP-engaged lipid droplet subpopulation
17. Bing Li (MPI Münster): Modeling and analysis of mouse primordial germ cells delamination
18. Tamara López López (UKE, Hamburg): Microenvironment and chemical cues control DC migration
19. Svitlana Palii (UKE, Hamburg): Migratory behaviour in branched networks
20. Yogishree Arabinda Panda (TU Dresden): Localized actin cortex perturbation induces a sustained membrane tension gradient across the cell
21. Inga Pauels (University of Münster): Dynamic Mapping of Endosomal Cholesterol Using the Novel Cholesterol Analogue n-CHIM-L*HCl
22. Anna Pawluchin (University of Münster): Modeling neuronal migration and neuromigratory disorders using human NPC-derived neurons in a 3D culture system
23. Kiet Phong (MPI Münster): Mechano-architectural principles enabling the establishment of immune-evasive niches in Lynch syndrome colorectal cancer



24. Janna Puschmann (University of Münster): Scube2 primes Dispatched and ADAM10-mediated Shh release by recruiting HDL acceptors to the plasma membrane
25. Annemarie Quas (University of Münster): Lipi-mediated formation of crystalline microdomains in the yeast plasma membrane
26. Archana Rajan Vellandath (University of Münster): Cell volume-dependent opening of tricellular junctions regulates epithelial barrier function
27. Andreas Schoenit (CNRS & Université Paris Cité): Epidermal cell delamination is driven by local force coordination
28. Vinayak Sivaramakrishnan (MPI Münster): Esm1+ endothelial cells shape renal vasculature and function via Notch
29. Greta Tellkamp (MPI Münster): Plasticity of neuronal migration during tissue repair: Lessons from the developing vertebrate retina
30. Namitha Tharayil Jayalal (University of Münster): Assembly of a trivalent junctional complex links adhesion and barrier function at cell vertices
31. Nele Van Wyngaerden (University of Münster): Imidazolium-based Cholesterol Analogs (CHIMs) for Tracking and Targeting Subcellular Cholesterol Pools
32. Leah Vehring (University of Münster): Mechanobiological regulation of mast cell homeostasis and function
33. Jannis Wittke (University of Münster): Visualization of sulfation epitopes on HSPGs in Drosophila wing discs using single-chain variable fragments (scFvs)
34. Maria Zacarias Gorjao (MPI Münster): How developing tissues resolve local disorganisation: Clearance of ectopic neuronal clusters during retinal morphogenesis
35. Bénédicte Lefèvre (Institut Curie): Exploring the effects of muscle-generated mechanical constraints acting on Drosophila midgut tissue
36. Lucia Baldauf (University College London): Illuminating Forces in Living Tissues
37. Andi Weber (University College London): Myosin minifilament alignments drives cytokinetic shape changes



SPECIAL THANKS TO

FCI
FONDS DER CHEMISCHEN INDUSTRIE

DFG

PLASMIDSAURUS

Biozym
SCIENCE IS OUR BUSINESS

Die Techniker

das dokuteam
bewegt ihre dokumente

MCE®
MedChemExpress

ZEISS

biomol
Part of Europa Biosite

K-TK
drosophilacenter.com

ROTH®

Nikon

Novogene