

# AT THE INTERFACE OF CELL FATE AND TISSUE DYNAMICS

May 31 – June 2, 2023

**PROGRAM**

## DAY 1 – MAY 31, 2023

13:00 – 13:10 *Opening*

### SESSION 1 (Chair: Milos Galic)

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13:10 – 13:45 **Carl-Philipp Heisenberg:** Cell and tissue mechanics in zebrafish gastrulation

13:45 – 14:20 **Jean-Léon Maître:** Mechanics of blastocyst morphogenesis

14:20 – 14:55 **Assaf Zaritsky:** Bottom-up characterization of collective cell behavior

14:55 – 15:20 **Flash Talks Poster Promo 1-5**

15:20 – 16:30 *Coffee break and Poster Presentation (odd numbers)*

### SESSION 2 (Chair: Sebastian Rumpf)

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16:30 – 17:05 **Kerstin Bartscherer:** Skin regeneration in the spiny mouse

17:05 – 17:40 **Tatjana Piotrowski:** Zebrafish sensory hair cell regeneration and how to turn lateral line into ear hair cells

17:40 – 18:15 **Leah Biggs:** Kinome-wide screen identifies Raf-MAPK pathway as a regulator of hair follicle stem cell plasticity

## DAY 2 – JUNE 1, 2023

### SESSION 3 (Chair: Mara Pitulescu)

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09:00 – 09:35 **Didier Stainier:** Transcriptional adaptation, a newly discovered mode of genetic compensation

09:35 – 10:10 **Karina Yaniv:** Vascular Control of cell fate specification during organ growth and regeneration

10:10 – 10:45 **Britta Trappmann:** 3D biomimetic models of vascularized tissues

10:45 – 11:10 *Coffee break*

### SESSION 4 (Chair: Kerstin Bartscherer)

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11:10 – 11:45 **Shankar Srinivas:** Single-cell phenomics reveals behavioural and mechanical heterogeneities underpinning migratory activity during mouse anterior patterning

11:45 – 12:20 **Anne Grapin-Botton:** Collective behaviour and mechanics in pancreas organoids

12:20 – 12:55 **Sara Wickström:** Regulation of stem cell fate by mechanical forces

12:55 – 13:30 **Flash Talks Poster Promo 6-10**

13:30 – 14:45 *Lunch & Poster Presentation (even numbers)*

### SESSION 5 (Chair: Leah Biggs)

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14:45 – 15:20 **Elazar Zelzer:** The proprioceptive system as a new regulator of musculoskeletal biology

15:20 – 15:55 **Frank Schnorrrer:** Zooming into the sarcomere: from single molecules to molecular forces

15:55 – 16:30 **Roland Le Borgne:** Role of cell-cell junction plasticity and mechanics in cell fate acquisition

16:30 – 16:45 **Flash Talks Poster Promo 11-13**

16:45 – 17:45 **Poster Presentation** (odd and even numbers)

## DAY 3 – JUNE 2, 2023

### SESSION 6 (Chair: Maria Bohnert)

- 09:00 – 09:35 **Elke Ober:** Building an organ: from progenitors to a functional liver architecture
- 09:35 – 10:10 **Romain Levayer:** Collective effects in epithelial cell death: from cell competition, issues homeostasis to cell extrusion
- 10:10 – 10:45 **Olivier Pertz:** Self-organisation of MAPK signaling dynamics in the epithelium
- 10:45 – 11:15 *Coffee break*

### SESSION 7 (Chair: Britta Trappmann)

- 11:15 – 11:50 **Milos Galic:** Curvature-dependent selforganization in cellular systems
- 11:50 – 12:25 **Milka Sarris:** Visualising neutrophil migration and signalling during inflammatory responses
- 12:25 – 13:00 **Robert Insall:** Interactions between chemoattractants causes unexpected outcomes repulsion

## POSTERS

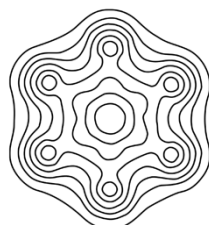
NO	NAME	POSTER TITLE
1	Lena Prange	Investigating formin regulated actin reorganization and its influence on transcriptional level
2	Maximilian Gass	The phosphoinositides PI(4,5)P2 and PI(3,4,5)P3 control slit diaphragm formation and endocytosis in Drosophila nephrocyte
3	Patrick Günther	A biomimetic platform to vascularize human brain organoids
4	Esther Bovay	Mechanisms of intestinal artery formation during development
5	Inga Pauels	Two pore channel 2 (TPC2) activity governs leukocyte adhesion in endothelial cells
6	Tanmay Sadhanasatish	A molecular optomechanics approach to reveal functional relevance of force-bearing cellular linkages
7	Juan Quispe Haro	Time defined photoswitchable bacterial interactions
8	Priyadarshini Ravindran	The regulation of exocytosis during neuronal polarization
9	Neereja Sanal	TORC1 regulation of dendrite regrowth after pruning is linked to actin and exocytosis
10	Simone Rey	Glial-dependent clustering of voltage-gated ion channels in Drosophila precedes myelin formation
11	Dennis Hoffmann	Polarity oscillations in zebrafish PGCs regulate complex cell migration behaviours
12	Melina Hußmann	Svep1 is a binding ligand of Tie1 and affects specific aspects of facial lymphatic development in a Vegfc-independent manner
13	Thea Jacobs	Modulation of actomyosin-based vertex mechanics controls epithelial permeability
14	Julia Wittmar	Characterization and analysis of yeast membrane-derived particles
15	Clara Rickhoff & Azadeh Alavizargar	Contribution of Molecular Dynamics Simulations to the Understanding of Complex Biological Systems
16	Sai Krishnan	Observing single dynamin-mediated fission events in TIRFM-amenable synapses
17	Nils Hohaus	Binding of Synaptic Calcium Channel Subunits by Neurexins

NO	NAME	POSTER TITLE
18	Lucas Lamparter	Cell-cell collisions augment collective swarm dynamics in immune cells
19	Giuseppe Trapani	Regulation of growth factor signaling by the nanoscale presentation of the extracellular matrix
20	Jurij Froese	Two-way Dispatched function in Sonic hedgehog shedding and transfer to highdensity lipoproteins
21	Cynthia Amakiri	WASH-mediated endocytosis of HPV16: Mechanism and regulation
22	Anusha Aravamudhan	Mechanisms of arterial specification in the murine lung
23	Nele van Wyngaerden	The design and synthesis of imidazolium-based cholesterol analogs to study cell membrane dynamics
24	Duy Diep	A metabolically controlled contact site between lipid droplets and vacuole
25	Xuetong Zhao	Ldm1 promotes actin-based transport of Lipid Droplet and Mitochondria, and is required for Meiosis
26	Marie Hugenroth	Pex31 – A new player in lipid droplet biogenesis
27	Rebecca Fausten	Fat storage in the nucleus
28	Karthik Subramaniam	Structural Exploration of the Neurotoxins from the Black Widow Spider
29	Matthew Davies	Spectraplakins Couple Microtubule Orientation to Actin During Dendrite
30	Jan Schick	Neural Network-Assisted Analysis of Cellular Organization in Migrating Cells
31	Rui Chen	Single cell analysis of the transcriptional dynamics during embryo dormancy reveals critical function of the Hippo pathway in the maintenance of pluripotent lineage
32	Harshath Amal	TGF-beta signaling regulates tricellular junction remodeling in the follicle epithelium during oogenesis in Drosophila
33	Marga Albu	Distinct mechanisms regulate ventricular and atrial chamber wall formation
34	Mariia Golden	Red flour beetle yolk dynamics: from cleavage to compactisation
35	Newsha Mortazavi	Cellular and molecular functions of basement membrane during cardiac morphogenesis
36	Fatemeh Abbasi	Dynamic Microconfiner: a novel instrument to investigate confined cell behaviour
37	Yuval Tamir	Quantifying the interplay between single cell morphology and proteomic signature
38	Jaakko Lehtimäki	Guidance cues steering multipolar neuronal migration in the vertebrate retina
39	Julian Malchow	Neuro-vascular communication controls tip cell behavior and vascular patterning
40	Mauricio Rocha Martins	How developing tissues compensate for unwanted cell death: Lessons from the zebrafish retina

## SPECIAL THANKS TO



**das dokuteam**  
bewegt ihre dokumente



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FONDS DER  
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