

BaCell 3D

Basel, Switzerland
May 8-9, 2023



Monday, May 8th

8:30 – 9:15	Arrival and registration
9:15 – 9:30	BaCell3D Organizing Committee Welcome & Introduction

Recapitulating Development & Regeneration *in vitro*

Chairs: Akanksha Jain, Mehmet Girgin, and Laura Capolupo

9:30 – 10:00	Prisca Liberali (FMI) "Symmetry breaking and self-organization in intestinal organoids"
10:00 – 10:15	Valentin Dunsing (Aix-Marseille Université) "Quantitative 3D live-imaging of self-organisation in embryonic organoids"
10:15 – 10:45	Barbara Treutlein (ETHZ) "Understanding fate specification during early human brain development"
10:45 – 11:15	<i>Coffee Break</i>
11:15 – 11:30	Elisa Magistrati (FMI) "Cytokines secreted by uterine NK influence extra-villous trophoblast differentiation"
11:30 – 11:45	Mathieu Hautefeuille (Sorbonne Université) "Development-like construction of non-embedded microcapillaries to study the role of mechanical stimuli on liver sinusoidal endothelial cells"
11:45 – 12:15	Denis Duboule (EPFL) "Understanding the Hox Timer by using Pseudo-embryos"
12:15 – 12:30	Paul Park (TomoCube) "Holotomography and artificial intelligence: label-free 3D imaging, classification, and inference of live cells and organoids"
12:30 – 13:30	<i>Lunch Break</i>

Organ-on-a-chip and Microphysiological Systems

Chairs: Erik Mailand, Romuald Parmentier, and JiSoo Park

13:30 – 14:00	Andreas Hierlemann (ETHZ) "Microphysiological systems featuring microfluidic and microsensor structures"
14:00 – 14:15	Lisette van Os (University of Bern) "Hydrogel density and flow profile affect immune cell extravasation in a microfluidic model of lung infection"
14:15 – 14:30	L. Francisco Lorenzo Martín (EPFL) "Spatiotemporally resolved <i>ex vivo</i> colorectal cancer development in engineered mini-colons"
14:30 – 15:00	Ivan Martin (DBM, University of Basel) "Human 3D organotypic culture systems towards tissue regeneration and disease modeling"
15:00 – 15:30	<i>Coffee Break</i>

Keynote Speaker

Chairs: Mehmet Girgin, Maren Diepenbruck, and Ashley Maynard

15:30 – 16:30	Hans Clevers (pRED, Roche) "Stem cell-based organoids in human disease"
16:30 – 17:00	<i>Coffee and Refreshments</i>

Poster Session & Networking

17:00 – 18:30	<i>Poster Session 1 and "Flying" Dinner</i>
18:30 – 20:00	<i>Poster Session 2 and "Flying" Dinner</i>

Tuesday, May 9th

9:00 – 9:20	Arrival and registration
9:20 – 9:30	BaCell3D Organizing Committee Welcome & Announcements

Disease Modeling and Drug Discovery

Chairs: Philipp Wahle, Umut Kilik, and Saba Rezakhani

9:30 – 10:00	Clementine Le Magnen (DBM, University Hospital Basel) "Patient-derived organoids as tools for basic and translational research in urological cancers"
10:00 – 10:15	Alissa Muller (IOB) "High-efficiency base editing in human retinal and RPE models"
10:15 – 10:30	Aristeidis Papargyriou (Technical University of Munich) "Delineating the epithelial-mesenchymal plasticity driven organoid phenotypic heterogeneity to identify novel therapies in pancreatic cancer"
10:30 – 10:45	Christoph Dehio (Biozentrum, University of Basel) "Human bladder microtissue model for studying urothelial infections with high spatial and temporal resolution."
10:45 – 11:15	<i>Coffee Break</i>
11:15 – 11:30	Julien Klimmt (Ludwig Maximilian University of Munich) "Reproducible and controllable human iPSC-derived cortical tissue models to investigate Alzheimer's disease"
11:30 – 12:00	Andreas Moor (ETHZ) "Systematic perturbation of cellular interactions in the tumor microenvironment"
12:00 – 12:15	Dominic Hoepfner (Novartis) "Applied Tissue Models in Drug Discovery"
12:15 – 12:30	Tijmen Booi (Nexus, ETHZ) "Automating and miniaturizing patient-derived organoid assays – drug screening for hepatocellular carcinoma"
12:30 – 13:30	<i>Lunch Break</i>

Organoid Technologies

Chairs: Ashley Maynard, Maren Diepenbruck, and Leoni Swart

13:30 – 14:00	Nikolche Gjorevski (IHB, Roche) "Architecturally accurate multi-compartment organoids as models of intestinal inflammation"
14:00 – 14:15	Mattia Francesco Maria Gerli (University College London) "Single cell-guided prenatal derivation of primary epithelial organoids from the human amniotic and tracheal fluids"
14:15 – 14:30	Franka Voigt (FMI, University of Zurich) "Deciphering RNA localization codes via live single-molecule imaging in organoids"
14:30 – 15:00	<i>Coffee Break</i>
15:00 – 15:30	Gray Camp (IHB, Roche) "Exploring the human condition with organoid and single-cell technologies"
15:30 – 15:45	Fides Zenk (ETHZ, EPFL) "Single-cell epigenomic reconstruction of developmental trajectories in human neural organoid systems from pluripotency"
15:45 – 16:00	Ramsey Najm (IMBA) "Mapping Neuronal Networks in Cerebral Organoids with Single-cell Transcriptional Resolution"
16:00 – 16:15	Gaspard Pardon (BET Facility, EPFL) "Advancing Cancer Research with Bioengineering and Organoids Technology"
16:15 – 16:45	<i>Coffee Break</i>

Keynote Speaker

Chairs: Umut Kilik, Akanksha Jain, and Erik Mailand

16:45 – 17:45	Melissa H. Little (Murdoch Children's Research Institute) "Building a human kidney from pluripotent stem cells: challenges of cell identity, structure and scale"
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Wrap-up & Prizes

17:45 – 18:00	Best Short Talk and Poster Prizes Presentation
18:00 – 20:00	<i>Apéro & Networking</i>

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