



3rd edition EMBL-IBEC Conference

ENGINEERING MULTICELLULAR SYSTEMS

Poster Number	Name	Surname	Institution	Title
1	Aina	Abad	IBEC	Long-range organization of primary intestinal fibroblasts guides in vitro epithelial migration through the secretion of aligned extracellular matrix proteins
2	Juan Francisco	Abenza Martínez	IBEC	Mechanical control of the mammalian circadian clock via YAP/TAZ
3	Gaia	Amato	IBEC	Developing Human Organoids To Model Genetic And Systemic Conditions During Congenital Anomalies Of The Kidney And Urinary Tract.
4	Maria José	Antunes Sintra	EMBL	In vitro recapitulation of heterochrony during vertebrate anterior?posterior axis development
5	Katia	Barrett	IBDM	Epithelial-mesenchymal coupling drives axis elongation in Xenopus explants
6	Nataliya	Basalova	Lomonosov Moscow State University	Dynamics of fibrotic foci formation during bleomycin-induced pulmonary fibrosis in mice
7	Alina	Batzilla	EMBL Barcelona	The contribution of the innate immune response to blood-brain barrier breakdown in Cerebral Malaria
8	Dirk	Benzinger	The Francis Crick Institute	Optogenetic engineering of morphogen gradients recapitulates dynamic neural tube patterning
9	Valentin	Bonnet	Institut Pasteur / Ecole Polytechnique	Deciphering the impact of the APC mutation on CAR T cells cytotoxicity using mouse and patient-derived 3D models in microfluidics.
10	Miquel	Bosch Padrós	IBEC	Mechanics of apical constriction: an optogenetic approach
11	Louise	Breideband	BMLS, Goethe University Frankfurt a.M.	Upgrading a Consumer Stereolithographic 3D Printer to Produce Physiologically Relevant Cancer Models
12	Joan	Casamitjana	UB / IDIBELL	A single-cell atlas of the murine pancreatic ductal tree identifies novel cell populations with



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				potential implications in pancreas regeneration and exocrine pathogenesis.
13	Maria	Costanzo	EMBL Barcelona	Size control of in vitro somites
14	Ibrahim Halilullah	Erbay	University of Galway/ IBEC	Integrated Computational-Experimental Analysis of Shear Impact on Intestinal Crypt Dynamics and Mucus Mechanics
15	Hirumune	Eto	Hubrecht Institute	Microfluidic control of Notch signalling reveals a dynamic communication code for cell fate determination during intestinal homeostasis
16	Laura	Faure	IBEC	3D micropatterned traction force microscopy : a new technique reveals that single epithelial cells can exert pushing forces on their environment
17	Ainhoa	Ferret Miñana	Institute for Bioengineering of Catalonia	3D bioengineered liver for the study of acute and chronic hepatic damage
18	Daniel	Garcia-Gonzalez	Universidad Carlos III de Madrid	Mechanical and Functional Responses in Astrocytes under Alternating Deformation Modes Using Magneto-active Substrates
19	Amélie	Godeau	Institute for Bioengineering of Catalonia (IBEC)	Mechanics of Human and Mouse Embryo Implantation
20	Jordi	Gonzalez Molina	Karolinska Institutet	Adipose Prototissues: biomaterial-based synthetic tissues to investigate cancer metastasis
21	Matt	Govendir	EMBL Barcelona	Biomechanics of blood brain barrier disruption in cerebral malaria
22	Olga	Grigorieva	Lomonosov Moscow State University	Reconstitution of the cellular microenvironment using decellularized extracellular matrix activates cell differentiation in vitro
23	Alice	Gros	IBDM/Aix Marseille Uni/CNRS/Turing Centre for Living Systems	3D quantitative analysis of gastruloid symmetry breaking



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24	Judith	Guasch	ICMAB-CSIC	Artificial extracellular matrices based on 3D hybrid hydrogels for immune cell and organoid manufacture
25	Pedro Enrique	Guerrero	Universidad de zaragoza	Targeting hypersialylation in pancreatic ductal adenocarcinoma models generated with microfluidic devices reverses its malignant phenotype
26	Paula	Guerrero López	Aragon Institute of Engineering Research (I3A)	UNRAVELLING THE RELATIONSHIP BETWEEN NUTRIENT AVAILABILITY IN TUMOR MICROENVIRONMENT AND CANCER PROGRESSION.
27	Pau	Guillamat	IBEC	Nematically-guided morphogenesis
28	Levin	Hafa	BMLS - Uni Frankfurt	Laser patterning bioprinting using a light sheet-based system equipped with light sheet imaging produces long-term viable full-thickness skin constructs
29	Masaya	Hagiwara	RIKEN BDR	Engineering In-vitro Microenvironments to Replicate Complex In Vivo Conditions for Organoid Architecture
30	Elisa	Hahn	EMBL Barcelona	Cellular Mechanics and Self-Organization during Axes Formation in Mouse Gastruloids
31	Soraya	Hernández	University of Zaragoza	Engineering of a simplified 3D microfluidic in vitro model for tumour-stroma dynamics of pancreatic ductal adenocarcinoma microenvironment
32	Sarah	Hindle	Blizard Institute, Queen Mary University of London	Replicating Dynamic Immune Responses within a Microfluidic Human Skin Equivalent Model
33	Christine	Ho	University of Southern California	Synthetically guided development of mobile embryoid bodies based on cardiac contractions
34	Alex	Hughes	Department of Bioengineering, University of Pennsylvania	Harnessing the rhythmic biology of early kidney formation for synthetic morphogenesis



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35	Viola	Introiini	EMBL Barcelona	Effect of febrile temperatures on cerebral malaria in a 3D in vitro microvascular model
36	Míriam	Javier Torrent	University of Liège, GIGA Neurosciences	Role of mechanotransduction in the control of interneurons migration in the cortex
37	Marsel	Khaliullin	Alabuga International School	Généra ? a Tissue Engineering Machine
38	Heidi	Klumpe	Boston University	Engineering adhesion to identify design principles for robust cell-cell aggregation
39	Sebastian	Kühn	Leibniz-Institut für Polymerforschung Dresden e.V.	μGUIDe ? A precision microgel platform to direct development in vitro
40	Jorge	Lázaro Farré	EMBL	A stem cell zoo to study interspecies differences in developmental tempo
41	Jia Le	Lim	EMBL Barcelona	The gastrulating zebrafish under cold spells.
42	Valentina	Magno	Leibniz Institute for Polymer Research	Sulfated glycosaminoglycan-based microgels for programming VEGF gradients in human kidney organoids
43	Marina	Marchenko	Physics of Life TU Dresden / EMBL Barcelona	Influence of apical constriction on tissue morphology and cell fate in brain organoids
44	Nick	Marschlich	EMBL	Influence of geometry on self-organisation in early zebrafish development
45	Guillermo	Martínez-Ara	Institute for Bioengineering of Catalonia	An optogenetic toolset to understand and control epithelial mechanical balance.
46	Marija	Matejic	IBEC	Mechanics of cell extrusion in intestinal organoids



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47	Antoni	Matyjaszkiewicz	EMBL Barcelona	LimbNET: modelling and simulation of limb developmental patterning in an online platform
48	Matthias	Merkel	Turing Center for Living Systems, Center for Theoretical Physics, CNRS, Aix-Marseille University	Robustness of oriented tissue deformation
49	Laura	Morato Concejero	Universidad de Sevilla	From morphology patterns to epithelial morphogenesis: exploring topology and natural variation
50	Jose	Muñoz	Universitat Politècnica de Catalunya	Computation of growth distribution in organogenesis
51	Tomas	Noordzij	Hubrecht Institute	Uncovering the maternal-fetal crosstalk during implantation by live-imaging
52	David	Oriola	Polytechnic University of Catalonia	A positive feedback loop controls the onset of gastruloid symmetry-breaking
53	Mallica	Pandya	University College London	Engineering Shape Changing Tissues to Understand Morphogenesis
54	Francesco	Pasqualini	University of Pavia	Mechanobiology and Morphogenesis: New (Vertically Integrated) Tools for an Old Problem.
55	Marion	Raich	Technical University of Munich (TUM), Department of Bioscience	Multi-cellular rosette formation guides cellular rearrangement initiating lumen opening in PDAC organoids
56	Fabian	Reinisch	Goethe University Frankfurt	Exploring Embryonic Development in Simulated Microgravity: Insights from Gastruloid Cultures
57	Marc	Rico Pastó	Institute for Bioengineering of Catalonia	Circulation-on-a-Chip: Cell Survival Under Pro-Apoptotic Mechanical Cues in Metastasis
58	Tosca	Roncada	Trinity College Dublin	Biofabrication of Structurally Organised Cartilage Through the Integration of Melt Electrowriting and Photocrosslinkable Decellularized ECM Hydrogels



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59	Tamara	Rossy	Massachusetts Institute of Technology	Investigating the role of exercise on neuromuscular health and disease in a multi-tissue in vitro model
60	Ayse Tugce	Sahin	Helmholtz Munich- Helmholtz Pioneer Campus	Structure-Function Relationships of Mucociliary Clearance in the Human Airways as Benchmark for Organotypic Lung Tissue Engineering
61	Ryan	Sarkar	BMLS, Goethe University Frankfurt a.M.	SHAPE: Investigating innate immunity in real microgravity aboard the International Space Station using advanced human bone marrow organoids.
62	Sebastien	Sart	Institut Pasteur	Microfluidic Droplets for Mapping and Regulating Self-Organization of Organoids
63	Joana	Silva	EMBL Barcelona	Hormonal Regulation of Germ Layer Specification in Micropatterned Gastruloids
64	Bart	Smeets	KU Leuven	Active foam behavior of tissue coalescence in biofabrication
65	Kristina	Stapornwongkul	EMBL Barcelona	Metabolic control of germ layer proportions through regulation of Nodal and Wnt signalling
66	Meenakshi	Suku	Ms	Engineering innate immunology in a humanized, functional, in vitro model of healthy myocardium
67	Hanna	Szafranska	Laboratory of Molecular Biology	Scaled-up temporally resolved transcriptomics to uncover species-specific neurodevelopmental regulation
68	Wim	Thiels	KU Leuven	Using mechanical simulation to study early gastrulation movements in <i>C. elegans</i> .
69	Casper	van Bavel	KU Leuven	A Minimal Model for Early <i>C. elegans</i> Embryogenesis
70	Michiel	Vanslambrouck	KU Leuven	Image-based force inference by biomechanical simulation



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71	Virgile	Viasnoff	CNRS	Bioengineering Intrahepatic bile duct tubulogenesis from hiPSC using ligand-bound colloidal scaffolds
72	Isabel	Villaoslada	Instituto de Investigación Sanitaria de Aragón	PDXO-on-chip: a novel approach for studying mechanical properties on pancreatic ductal adenocarcinoma.
73	Srivatsava	Viswanadha Venkata Naga Sai	IBEC Barcelona	Cell-matrix force transmission regulates the transition between naïve and primed pluripotency.
74	Kaja Nicole	Wächtershäuser	BMLS, Goethe University Frankfurt a.M.	Modulating ubiquitin signaling to control (non)immunogenic cell death, necroinflammation, and tumor development in patient-derived human mammary organoids
75	Tobias	Walther	Max Planck Institute for Medical Research	DNA microbeads for spatio-temporally controlled morphogen release within organoids
76	Thomas	Wilson	IBEC	Unveiling the 3D Mechanics of Tubular Epithelial Structures for Biohybrid Devices
77	Shafaq	Zahra	Universitat Politècnica de Catalunya	Inference of cytoskeleton and cell stress from TFM