20 YEARS IBEC

Institute for Bioengineering of Catalonia

IBEC
20th Anniversary Symposium

OCTOBER 22nd AND 23rd, 2026
BARCELONA

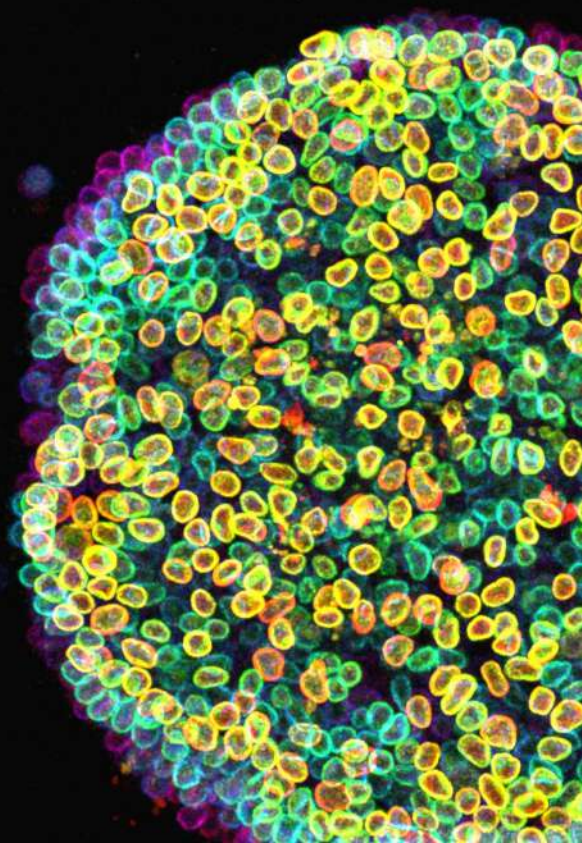


Image credit: Özge Özgüç, Integrative Cell and Tissue Dynamics Research Group.

FLASH PRESENTATIONS · SESSION 1

Thursday 22nd October · 10:25 – 11:00 h

NAME	SURNAME	TITLE
Mauricio	Cano Galván	Mechanotool: An Autonomous Open-Source Software Platform for Large-Scale Multiparametric Analysis of Bio-Atomic Force Microscopy data
Zahra	Saeidikia	Imaging and modelling PEG-PLA nanoparticles and their disassembly of Aβ42 fibrils
Esteban	Suárez Baquero	Development of an All-Optical Platform for Imaging and Holographic Manipulation of Neural Circuits in Behaving Mice
Fleur	Clemenceau	Simultaneous 12-lead ECG for the validation of novel cellulose-based electrodes in human subjects
Lluís	Fernández Romero	Curvature Regularized Time Warping for Chromatographic Alignment
Mariano	Martín	Systematic mutational mapping reveals optimal amyloid formation for RIPK function
Revathi	Ravindran	Towards a Comprehensive Modelling and Design Framework for Predicting Biodegradation at a Macroscale

FLASH PRESENTATIONS · SESSION 2

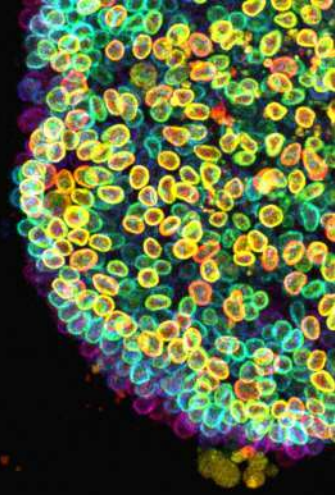
Thursday 22nd October · 12:25 – 13:10 h

NAME	SURNAME	TITLE
Joel	Àlvarez Puig	Modelling biomaterial-associated biofilm infections in *Galleria mellonella* for antibiotic susceptibility screening
David	Bartolomé Català	Microphysiological reconstruction of the colonic tumor microenvironment for T cell migration studies
Florencia	Lezcano	Toward biohybrid facial actuation: 3D bioprinting of functional skeletal muscle systems
Andreu	Matamoros Anglès	Extracellular vesicles in Alzheimer's disease: Amyloid β aggregation and neuronal network dysfunction
Nicolle	Miranda de Lima	Engineering a Scalable and Highly Sensitive Microfluidic Platform for Real-Time Hyperpolarised 13C Metabolic Imaging of 3D Hepatoblastoma Models
Daniel	Moya Rull	A reproducible and scalable human airway and lung organoid platform for infection modelling and therapeutic screening
Chiara	Ninfali	A Human 3D Platform combining Engineered Skeletal Muscle and Pancreatic Cancer Spheroids to model Cancer-Associated Cachexia
Anna	Panteleeva	Monitoring Neurodegeneration in a Brain-on-a-Chip with an NfL Biosensor
Francisco Manuel	Sáez González	From Organoids to Assembloids: Modeling Neurovascular Dynamics in Spinal Cord Injury
Jarmila	Stankova	Spatially resolved analysis of CRISPR-mediated metabolic gene knockouts in tumor xenografts

FLASH PRESENTATIONS · SESSION 3

Thursday 22nd October · 15:25 – 16:10 h

NAME	SURNAME	TITLE
Claudia	Camarero-Hoyos	A multifaceted approach to define a novel family of antimalarial compounds: the role of protein aggregation in *Plasmodium*.
Dario	Castellana	Dual-Action 3D Biomaterial for radiotherapy: protection and regeneration of tissue during X-ray treatment
Esra	Kasapgil	Endothelium-mimicking hemocompatible coatings for artificial placenta systems
Joaquín	Martínez Tambella	Restoration of edge detection and visually guided behavior in ambient white light with photoswitchable small molecules
Carlos	Moreno Yruela	Nucleosome-Based Platforms to Decipher Histone Deacetylase Mechanisms and Develop Modulators in High Throughput
Aina	Albajar Sigalés	Studying the mechanical regulation of nucleocytoplasmic transport using Single Molecule Tracking
Mariana	Azevedo Gonzalez Oliva	Soft matrix viscoelasticity: from mechanotransduction to neural communication
Marija	Matejčić	Mechanical Coordination of Intestinal Cell Extrusion by Supracellular 3D Force Patterns
Laura	Parra Gutiérrez	Characterization of matrix invasion and monolayer formation during early mouse embryo implantation



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