Programme

Wednesday 4 December	
09:00	Registration and Coffee
10:00	Welcome and Introduction
	Session I
10:10	The role of the Piezo1 and TRP channel interactome in cellular Mechanotransduction **Boris Martinac,** Victor Chang Cardiac Research Centre
10:50	Oncogenic signaling and stiffness sensing **Mari Johanna Ivaska**, University of Turku
11:20	Shaping the Ear: Exploring the Physical and Mechanical Cues **Bowen Chen,** King's College London
11:23	Laminin-defined mechanics: key to retinal epithelium function and physiological plasticity **Aleksandra N. Kozyrina,** Interdisciplinary Centre for Clinical Research, RWTH Aachen University
11:26	Possible therapeutic effect through nanoparticle motion in magnetomotive ultrasound **Jules Reniaud**, Lund University
11:30	Signaling and mechanosensing at cell-cell junctions during intestinal homeostasis and regeneration **Andrew Clark,** University of Stuttgart
11:40	Forces in Motion: Mechanobiology of Gonad Development in C. elegans **Ronen Zaidel-Bar**, Tel Aviv University
11:50	Cell mechanics and mechanotransduction in cardiovascular morphogenesis **Julien Vermot**, Imperial College London
12:20	**Lunch**
	Session II
13:30	Mechanobiology of cellular senescence **Joe Swift,** University of Manchester
14:00	Application of high-frequency nanovibration to patient-derived glioblastoma cells **Kirsty Weighill**, University of Strathclyde
14:03	Interplay of Piezo1 and Ezrin in both inside-out and outside-in mechanotransduction **Marta Cubero Sarabia**, University of Glasgow
14:06	Modulation of Piezo1 channel kinetics by a naturally occurring fatty acid contributes to endothelial functions **Yurou Cai**, University of Leeds
14:10	Piezo1 is a mechanosensor of soft matrix viscoelasticity **Mariana Azevedo Gonzalez Oliva**, IBEC Parc Cientific Barcelona

14:20	PIEZO1 interaction with adhesion molecules mechano-regulates endothelial cell-cell junctions **Eulashini Chuntharpursat-Bon**, University of Leeds
14:30	Mechanical memory of morphology in confined migrating cells **Sylvain Gabriele**, University of Mons
15:00	Tea Break
	Session III
15:30	Engineered viscoelasticity in stem cell microenvironments **Manuel Salmeron-Sanchez**, University of Glagow / IBEC
16:00	Epithelial cell interactions in an overcrowded environment: exploring the phenomena of jamming and live cell extrusion **Ivana Pajic-lijakovic,** University of Belgrade
16:10	Mechanobiology Community Session
	Session III (continued)
17:00	Epithelial mechanics from the bottom up **Xavier Trepat**, Institute gor Bioengineering of Catalonia
17:30	Drinks and Networking
18:30	Close of Day 1

Thursday 5 December	
08:30	Registration and Coffee
	Session IV
09:00	Integrating Mechanical Microenvironments; the Interplay of Shear Stress, Tissue Stiffness and Gene Expression **Elizabeth Jones**, KU Leuven
09:30	Towards a Perfusable Artery-On-Chip Model Replicating Human Atherosclerosis Development **Lorraine Couteau-Brisset**, Queen Mary University
09:33	Characterization of poroelastic diffusion in autosomal dominant leukodystrophy cells **Andrea Lagomarsino**, Università Degli Studi Di Genova, Italy
09:36	Intestinal Stem cell niche biomechanics in intestinal health and disease **Cai Johnson**, University of Glasgow
09:40	Decoding Piezo1-dependent Mechanotransduction Across Scales Using the GenEPi Biosensor **Konstantinos Kalyviotis**, The Francis Crick Institute/King's College London/Imperial College London
09:50	Spatial mechano-transcriptomics: mapping at single-cell resolution mechanical forces and gene expression in tissues **Adrien Hallou**, Kennedy Institute / University of Oxford
10:00	PIEZO1 force sensor in cardiovascular health, disease and physical exercise **David Beech,** University of Leeds
10:30	Coffee Break
	Session V
11:00	Tissue Fluidification in Pathophysiology **Scita Giorgio**, International Foundation of Medicine (IFOM)
11:30	Matrix viscoelasticity directs epithelial cell mechanobiology through substrate area confinement **Giuseppe Ciccone**, Institute For Bioengineering of Catalonia (IBEC)
11:33	Spatiotemporal regulation of nuclear deformation through modulation of cell cytoskeleton forces on photo-active interfaces **Francesca Mauro**, University of Naples Federico II
11:36	Extracellular matrix plasticity enables a pro-invasive mechanical cross-talk between cancer cells and cancer-associated fibroblasts **Hamid Mohammadi**, Crick Institute
11:40	Mechanical Homeostasis of Retinal Pigmented Epithelium across Space and Time **Jacopo Di Russo**, Rwth Aachen University
11:50	Mechanical regulation of metastasis by the brain vasculature **Marina Uroz,** Boston University

12:00	Mechanobiology and Bone Disease: Uncovering Novel Mechanisms in Osteoporosis and Cancer Bone Metastasis **Laoise McNamara**, University of Galway
12:30	Lunch
	Session VI
13:30	The Border Zone in Myocardial Infarction: a mechanobiological analysis at the cellular and supracellular scales **Vito Conte**, Eindhoven University of Technology
13:40	Computational modelling of mechano-mediated cardiovascular formation, growth, and remodeling **Tommaso Ristori**, Eindhoven University of Technology
13:50	Harnessing geometry and mechanics to engineer functional musculoskeletal microtissues **Sebastien Callens**, Eindhoven University of Technology
14:00	Hypertensive Pressure Mechanosensing Triggers Transdifferentiation of Vascular Smooth Muscle Cells to Foam Cells **Swiatlowska Pamela**, Imperial College London
14:03	Oncogenic molecular features triggered by the mechanoresponsive polycystin proteins in solid tumours **Angeliki-Ioanna Giannopoulou**, Biologist, Msc, Ph.d. Student
14:06	A Tour de Force through Cellular Nanoscale Mechanobiology in (Patho)Physiology **Carsten Schulte**, University of Strathclyde
14:10	3D Biomimetic piezoelectric scaffolds-bas **Oana Oana Dobre**, University of Glasgow
14:20	Controlled in-vitro ultrasound stimulation enhances actin and vinculin expression in osteoblast-like cells **Andrea Orthodoxou**, School of Engineering, University of Glasgow
14:30	Guiding Mechanotransduction in Blood Vessels **Ellie Tzima**, University of Oxford
15:00	Mechanobiology of Cancer Metastasis and Ageing: Insights from Microfluidic and Biophysical Models **Emad Moeendarbary**, University College London
15:30	Tea and Depart