Aitbay, Sanzhar PI3K β controls mechanical parameters of pancreatic tumours predictive of poor survival	44
Ajduk, Anna Dynamics of cavitation as a potential, non-invasive predictor of mammalian blastocyst quality	45
Almuedo-Castillo, Maria Presenter: Sousa Ortega, Ana A Yap-dependent transcriptional program directs cell migration for embryo axis assembly	46
Astrof, Sophie New mechanism of fibronectin fibril assembly revealed by live imaging and super-resolution microscopy	47
Avivi Kela, Shiri Mechano-regulation of contractile tubes: tension-dependent recruitment of RHGF-1 to stress fibers triggers spermatheca contraction in C. elegans	48
Bahadorian, Mohammadreza Multi-fractal analysis of ossification process in developing skull bone	49
Bantysh, Olga Ordering of quasi-laminar active nematic flows under confinement	50
Barrientos, Ricardo The contribution of extra-cellular matrix mechanics to tissue morphology during development	51
Barriga, Elias H Presenter: Espina, Jaime Reducing cluster stiffness is essential for collective cell migration in vivo	52
Boukany, Pouyan Understanding the mechanism of cancer cell invasion through a tunable and programable microenvironment	53

Posters A-Z

ECM degradation is essential for growth of the Drosophila abdominal

62

63

Role of mechanical forces on chromatin phase separated

condensates

epidermis

Davis, John Robert

	Posters A-Z
Delpierre, Julien Hepatoblast polarity is negotiated between neighbouring cells through extracellular matrix remodelling and polarized trafficking	64
Dent, Lucas The PIX-GIT mechanosensor complex couples cell shape and migration during Drosophila egg chamber development	65
Dent, Lucas Environmentally dependent and independent control of cell shape determination by Rho GTPase regulators FARP1 and TIAM2 in melanoma cells	e 66

Dullweber, Tim Non-linear dynamics in contact-based pattern formation 67 Duque, Carlos Spontaneous strains in tissue mechanics: topologically driven 68 morphogenesis Eckert, Julia Hexatic or nematic? Epithelia are multiscale active liquid crystals 69 Emig, Ramona The stretch-activated ion channel Piezo1 links mechanical and 70 biochemical signaling in human atrial fibroblasts Etienne, Jocelyn Embryo-scale epithelial buckling forms a propagating furrow that 71

74

A bottom-up approach to study front-rear cell polarization

García, María Mechanical control of nuclear import by Importin-7 is regulated by its dominant cargo YAP	75
George Abraham, Bobin Nanobody based lamin force sensor for studying nuclear mechanics	76
Ghisleni, Andrea Spectrin conformational transitioning is dictated by actomyosin topology and dynamics	77
Goodenough, Ashleigh How do the physical properties of perineuronal nets affect neuronal plasticity?	78
Granero Moya, Ignasi Development of a sensor to study mechanotransduction in the nucleus	79
Guinard, Inès Matrix stiffness controls megakaryocyte behavior and proplatelet formation through fibronectin- β3 integrin interaction	80
Gumulec, Jaromir Flow-based quantitative phase shear stress system for robust cell monolayer viscoelasticity estimation	81
Häkkinen, Hanna-Maria Clinging together to clean up: roles of E-cadherin in epithelial phagocytosis in the early embryo	82
Häring, Matthias Data-driven inference of a mechano-transduction-coupled model for the amnioserosa of Drosophila	83
Hassan, Abeer The mechanical properties of the sensory organ affect its function	84
Holle, Andrew Mechanical memory in confined migration	85

Horibe, Kazuya	
How are long-range association fibers developed?: Estimation of neural propagation by shortest paths on the cortical surface	86
Horvát, Szabolcs Characterizing the spatial organization of biological networks	87
Houtekamer, Ronja A mechanical G2 checkpoint controls epithelial cell division through E-cadherin-mediated regulation of Wee1-Cdk1	88
Hubert, Maxime On the theory of cell proliferation in epithelial tissues	89
Ivanova, Julia R. DARPins as novel actin binders: a modular tool for regulating actin dynamics	90
Jacques, Cécile Do defects in the nematic ordering of cancer-associated fibroblasts influence cancer cell invasion?	91
Kalyviotis, Konstantinos Direct functional imaging of Piezo1 dynamics with the designed fluorescent reporter GenEPi	92
Kasirer, Shahar Dynamic lateral inhibition regulates utricle patterning during inner ear embryonic development	93
Kaul, Verena Investigating the role of Abelson tyrosine kinase in Chironomus riparius mesoderm ingression.	94
Kong, Deqing Synchronization of pulsed contractions accelerates cell intercalation and germband extension in Drosophila	95
Kovooru, Lohitesh A self-organized tubulo-epithelial in vitro system to study metastatic clear cell renal cell carcinoma (ccRCC)	96

Extracellular matrix integration into PDMS-free organ-on-chip platforms	97
Kreysing, Eva Global membrane tension is independent of polyacrylamide substrate stiffness	98
Krishna, Abhijeet A spontaneous strain mediated mechanical model of the Drosophila wing disc eversion	99
Kumari, Reena Functionally distinct tropomyosin-actin filaments control focal adhesion organization and dynamics	100
Lemahieu, Grégoire Microfluidics-based generation of cancer spheroids for study on cell motility and mechanics	101
Lewis, Allison Under pressure: hydraulic force as a regulator of ductal differentiation and luminogenesis	102
Maia-Gil, Mariana Dissecting how nuclear properties impact nuclear migration in a crowded neuroepithelial: experiment and theory	103
Marchenko, Marina Is apical constriction a key driver of cell differentiation in brain development?	104
Martin-Blanco, Enrique Condensation of the Drosophila nerve cord is oscillatory and depends on coordinated mechanical interactions	105
Mateo, Tiphaine High-throughput tumor-on-chip to study micro-pancreatic tumors under mechanical compression	106
Mathieu, Mathilde Negative durotaxis: cell movement toward softer environments	107

Mckeown, Rachel Mechanical and long-range chemical signalling interactions in the developing Xenopus brain	108
Méndez Acevedo, Kevin Manuel Mechano-Molecular control of heart formation	109
Mezzena, Roberta Mechanotransduction in Krabbe lysosomal storage disorder	110
Mirouse, Vincent WAVE regulatory complex facilitates cell rearrangements through the generation of a protrusive F-Actin subpopulation at tricellular junctions	111
Misiak, Vladimir Minimalistic in vitro model to study intercalation in morphogenesis	112
Mitchell, Saranne J. Early activation of voltage-gated potassium channels induce cellular extrusion	113
Modes, Carl Topology-driven mechanobiology and mechanobiology-driven topology: form and function in complex tissues	114
Molina Jordan, Marc Exploring how force transmission to nuclear pore complexes affects nucleocytoplasmic transport	115
Montemurro, Marianne Identification of apoptosis and junctional tension as pro-tumoral factors in Drosophila	116
Mukherjee, Sudipta Investigating piezo1-dependent chemical signalling in the developing Xenopus laevis neuroepithelium	117
Muñoz, Jose Condensation of the Drosophila Nerve Cord is oscillatory and depends on viscoelastic properties and mechanical interactions	118

Pennacchio, Fabrizio Andrea	
Nucleus-cytoplasm volumetric coupling is regulated by mechanical forces	119
Pennarola, Federica Molecular forces involved in clathrin-mediated endocytosis of viruses and nanoparticles	120
Ramos, Ana Patricia Dissecting collective cell behaviour and epithelial sheet rearrangements during optic cup formation	121
Rappold, Ronja Mechanobiological alterations of the extracellular matrix in the gastrointestinal tract of mice upon Salmonella infection	122
Roy Choudhury, Ankit Role of mechano-gated ion channel NompC in the epithelial morphodynamics	123
Rumpf, Sebastian Tissue context determines neurite rupture during developmental pruning	124
Ryan, Allyson Quinn A mesoscale tissue tensegrity: modeling dural reflection force balance	125
Sala, Stefano Strain sensing in the actin cytoskeleton via testin: the odd one out among lim domain proteins	126
Sampietro, Marta Nanoscale analysis reveals distinct cytoskeletal architecture and mechanical properties in Chronic Lymphocytic Leukemia cells	127
Schoenit, Andreas Biomechanical regulation of cell fate and extrusion mode in epithelia	128

Serafini, Giulia	
The detachment of the blastoderm-vitelline envelope interaction and blastoderm chirality	129
Shrivastava, Ananya Investigating the influence of biophysical properties of the environment on tumor cell dormancy	130
Sipkova, Jana The mechanical regulation of Eph/ephrin signalling in the developing Xenopus brain	131
Soans, Karen Investigating the role of extracellular matrix topology during collective cell migration in vivo	132
Solowiej-Wedderburn, Josephine Working within constraints: a hypothesis for cellular mechanosensory feedback	133
Sprinzak, David Mechano-signaling feedback underlies precise inner hair cell patterning in the organ of Corti	134
Srejic, Nevena MEK5-ERK5 cascade: a molecular link between compressive force sensation and cell migration	135
Staddon, Michael Cell area distributions in a proliferating epithelium	136
Stamov, Dimitar Presenter: Mueller, Torsten Large area automated structural and mechanical analysis of developing cells and tissues	137
Sturgess, Wesley Proteomic analysis of force dependant changes in integrin-based adhesion complexes reveals a novel mechanosensitive role for septin 7	138

Sugden, Wade Mechanisms of flow-driven transcriptional control of hematopoietic stem cell development via YAP/TAZ regulation	139
Sumbal, Jakub Fibroblasts shape mammary epithelium in a mechanical force-dependent manner	140
Szalapak, Alicja Modelling the mechanics of cephalic furrow formation	141
Torrino, Stéphanie Mechanosensitive polyol pathway regulates biomolecular condensates	142
Tremmel, Moritz Mechanical stimulation of cells in 3D-microscaffolds reveals distinct roles of nonmuscle myosin II and alpha-actinin isoforms during tensional homeostasis	143
Tsiairis, Charisios Mechanical tissue stretching drives Wnt organizer establishment in Hydra	144
Ucar, Mehmet Can Guidance and optimization in branching morphogenesis	145
Vellutini, Bruno Programmed epithelial invagination prevents mechanical instability during gastrulation	146
Villeneuve, Clementine Coordination of compressive and contractile forces drive cell shape and fate changes to generate the hair follicle placode	147
Vorselen, Daan Phosphatidylserine-mediated phagocytosis involves unique cytoskeletal dynamics and coreceptors TREM2, CD14 and integrin $\alpha M\beta 2$	148
WANG, Xiuyu Mechanical properties of the nucleus in glioblastoma (GBM)	149

Warner, Harry Inflammatory activation drives re-sculpting and shear-thinning of the dendritic cell nucleus	150
Yang, Qiutan Mechanobiology in intestinal organoid crypt formation	151
Younesi, Fereshteh Mechanically induced epigenetic patterns governed regenerative features of mesenchymal stromal cells	152
Young, Jennifer Extracellular matrix mechanics regulate ovarian function with age	153
Yun, Sangwon Determinants of epithelial morphogenic change during oncogenic transformation	154
Zaher, Mira Characterization of the mechanics of ventral body wall morphogenesis in the chick embryo	155
Zheng, Yifeng Impact of stiffness on implant integration and axonal regrowth in rat spinal cord injury	156