

ESF-EMBO Symposium on Emergent Properties of the Cytoskeleton: Molecules to Cells

3-8 October 2010 Sant Feliu, Spain



Final Programme

Sunday 3 October	
17:00 - 19:00	Registration at ESF Desk
19:00	Welcome Drink
19:30	Dinner
Monday 4 October	
Welcome Address	
08:30 - 09:00	Michelle Peckham University of Leeds, UK Pilar Perez - Consejo Superior de Investigaciones Científicas, ES
Session 1: Myosin Structure and Function	
09:00 - 09:30	Michelle Peckham University of Leeds, UK <i>Diversity in the myosin superfamily</i>
09:30 - 10:00	Anne Houdusse - Institut Curie, FR <i>How myosin VI moves - answers from structural studies of this reverse motor</i>
10:00 - 10:15	Jim Sellers - NIH, US <i>Regulation of Drosophila myosin-7a by a binding partner</i> (short talk)
10:15 - 10:30	Margaret Titus - University of Minnesota, US <i>Chemotactic signalling requires a MyTH/FERM myosin</i> (short talk)
10:30 - 11:00	Coffee break
11:00 - 11:30	Claudia Veigel - University of Munich, DE <i>How single myosin motors work under load</i>
11:30 - 12:00	Justin Molloy - NIMR, UK <i>How actin and myosin are guided by weak forces</i>
12:00 - 12:15	Dan Mulvihill - University of Kent, UK <i>The recruitment of acetylated and unacetylated tropomyosin to distinct actin polymers permits the discrete regulation of specific myosins in fission yeast</i> (short talk)
12:15 - 12:30	Matthew Lord - University of Vermont, US <i>Differential regulation of fission yeast myosins via changes in the actin track</i> (short talk)
12:30	Lunch

Session 2: Actin Dynamics and Organisation I	
15:30 - 16:00	Coffee Break
16:00 - 16:30	Marie-France Carlier - CNRS, FR <i>Actin Dynamics</i>
16:30 - 16:45	Jonathan Terman - University of Texas, US <i>The multi-domain redox enzyme MICAL is a novel F-actin disassembly factor that directly regulates the actin cytoskeleton in response to extracellular guidance cues</i> (short talk)
16:45 - 17:00	Thomas Iskratsch - King's College London, UK <i>Formin follows function: a muscle specific isoform of FHOD3 is regulated by CK2 phosphorylation and promotes myofibril maintenance</i> (short talk)
17:00 - 17:30	Jan Faix - University of Hannover, DE <i>Cofilin and fascin cooperate in the disassembly of filopodia</i>
17:30 - 17:45	Jennifer Gallop - Harvard Medical School, US <i>Self-assembly of filopodia-like structures on supported lipid bilayers</i> (short talk)
17:45 - 18:00	Metello Innocenti - Netherlands Cancer Institute, NL <i>Role of mDia2 in filopodium formation as revealed by biochemistry</i> (short talk)
18:00 - 18:15	Sawako Yamashiro - Scripps Research Institute, US <i>Mammalian tropomodulins nucleate actin polymerization via their actin monomer-binding and filament pointed end-capping activities</i> (short talk)
18:15 - 18:30	Peter Gunning - University of New South Wales, AU <i>Tropomyosin Tn5NM1/2 regulates cell proliferation</i> (short talk)
19:00	Dinner
20:30 - 22:00	Poster Session I
Tuesday 5 October	
Session 3: Actin Dynamics and Organisation II	
09:00 – 09:30	Klemens Rottner - Helmholtz Centre for Infection Research, DE <i>Analysis of Arp2/3-complex function in protrusion</i>
09:30 - 09:45	John Heuser - Washington University, US <i>Revisiting the ultrastructure of the cytoskeleton</i> (short talk)
09:45 - 10:00	Rhoda Hawkins - University of Bristol, UK <i>Rebuilding cytoskeletal roads: Active-transport-induced polarisation of cells</i> (short talk)
10:00 – 10:15	Keren Kinneret - Technion Israel Institute of Technology, IL <i>Actin disassembly "clock" determines lamellipodial morphology</i> (short talk)
10:15 - 10:30	Florian Huber - University of Leipzig, DE <i>Actin network formation within cell-sized droplets: from star-like clusters to ladder-like stripes</i> (short talk)
10:30 - 10:45	Group Photo
10:45 - 11:15	Coffee break

11:15 - 11:45	Anne Ridley - King's College London, UK <i>Regulation of cytoskeletal dynamics by Rho GTPases</i>
11:45 - 12:15	Pekka Lappalainen - Institute of Biotechnology Helsinki, FI <i>Assembly and dynamics of actin stress fibers</i>
12:15 - 12:30	Evelyne Bloch-Gallego - Institut Cochin, FR <i>Role of netrin-1, its receptor DCC, tubulin modifications and RhoGTPases in the oriented migration of hindbrain neurons</i> (short talk)
12:30	Lunch
Session 4: Forces and Cell Adhesion in Biology	
15:30 - 16:00	Coffee break
16:00 - 16:30	Pierre-François Lenne - Institut de Biologie du Développement de Marseille Luminy, FR <i>Force generation and transmission during tissue morphogenesis</i>
16:30 - 16:45	Antonio Schepis - Stanford University, US <i>Alpha-E-catenin is required for gastrulation cell movement in zebrafish</i> (short talk)
16:45 - 17:00	Di Jiang - University of Bergen, NO <i>Regulation of actin dynamics by actin binding proteins in actomyosin contractile ring that drives notochord cell elongation</i> (short talk)
17:00 - 17:15	Bo Dong - University of Bergen, NO <i>N-WASP-dependent actin dynamics serves as a switch for extracellular lumen or intracellular vacuole formation during ascidian notochord tubulogenesis</i> (short talk)
17:15 - 17:30	Sasha Bershadsky - Weizmann Institute, IL <i>Focal Adhesions as mechanosensors</i> (short talk)
17:30 - 17:45	Ronen Zaidel-Bar - Mechanobiology Institute, SG <i>Regulation of cell-cell adhesion and the cytoskeleton during C. elegans morphogenesis</i> (short talk)
17:45 - 18:00	Pere Roca-Cusachs - Columbia University, US <i>Depletion of alpha-actinin reveals two mechanotransduction steps in cell adhesion</i> (short talk)
19:00	Dinner
20:30 - 22:00	Poster Session II

Wednesday 6 October**Session 5: Force Generation and Cellular Transport**

09:00 - 09:30	Mathias Rief - Ludwigs-Maximilians-Universität München, DE <i>Single molecule mechanics of cytoskeletal proteins</i>
09:30 - 10:00	Christoph Schmidt - Georg-August-Universität, DE <i>Mechanical communication between cells and environment</i>
10:00 - 10:15	Julien Husson - Insitut Curie, FR <i>Stiffness-adaptave force generation by primary T cell on surrogate APC: role of the TCR-CD3 complex and LFA1 integrin</i> (short talk)
10:15 - 10:30	Ross Rounsevell , University of California Berkeley, US <i>Reconstitution of a dynamic actin-myosin II cortex on a giant vesicle scaffold</i> (short talk)
10:30 - 11:00	Coffee break
11:00 - 11:30	Patricia Bassereau - Insitut Curie, FR <i>Membrane nanotubes and intracellular traffic</i>
11:30 - 11:45	Stephanie Miserey-Lenkei - Insitut Curie, FR <i>Rab and acto-myosin dependent fission of transport vesicles at the Golgi complex</i> (short talk)
11:45 - 12:00	Valeria Piazza - Georg-August-University Göttingen, DE <i>Multi-isotope Imaging mass spectrometry (MIMS) mapping of protein turnover in Hair cells reveals highly stable stereocilia</i> (short talk)
12:00 - 12:15	Eliza Morris - Harvard University, US <i>Transport in F-actin networks</i> (short talk)
12:15 - 12:30	David Richmond - University of California Berkeley, US <i>Forming vesicles with cellular features: new tools for cellular reconstitution</i> (short talk)
12:30	Lunch
14:00	Half-Day Excursion to Girona (free time)
19:00	Dinner
20:00 - 21:00	Forward Look Plenary Discussion

Thursday 7 October**Session 6: Microtubules and Motors I**

09:00 - 09:30	Anna Akhmanova - Erasmus Medical Centre Rotterdam, NL <i>Control of microtubule dynamics by End Binding proteins and their partners</i>
09:30 - 10:00	Gero Steinberg - University of Exeter, UK <i>UK Microtubule organization and motors (kinesins) in fungal model systems</i>
10:00 - 10:30	Carolyn Moores - Birbeck College, UK <i>Linking kinesin motor structure and function: small loops make a big difference</i>
10:30 - 11:00	Coffee break
11:00 - 11:30	Peter Rosenthal - NIMR, UK <i>EM Tomography of microtubules and Weibel Palade bodies</i>
11:30 - 12:00	Stan Burgess - University of Leeds, UK <i>EM Studies of Dynein</i>

12:00 - 12:30	Takashi Ishikawa - Paul Scherrer Institute, CH <i>Molecular mechanism of flagellar/ciliary bending motion revealed by electron cryo-tomography</i>
12:30	Lunch
Session 7: Microtubules and Motors II	
15:30 - 16:00	Coffee break
16:00 - 16:30	Erika Hozbaur - University of Pennsylvania, US <i>Dual functions of dynein: vesicular motor and microtubule tether</i>
16:30 - 16:45	Itushi Minoura - Riken Institute, JP <i>Dissecting the weak binding state of single-headed kinesin KIF1A using mutant microtubules</i> (short talk)
16:45 - 17:00	Jeffrey Woodruff - University of California Berkeley, US <i>Mitotic spindle disassembly occurs via distinct subprocesses driven by the Anaphase-Promoting Complex Aurora B kinase and kinesin-8</i> (short talk)
17:00 - 17:15	Johanna Roostalu - University of Heidelberg, DE <i>CIN8 is a kinesin that switches directionality in response to mechanical constraints</i> (short talk)
17:15 - 17:30	Isabelle Palacios - University of Cambridge, UK <i>Analysis of kinesin-1 function in vivo and in vitro</i> (short talk)
17:30 - 17:45	Leah Gheber - Ben-Gurion University of the Negev, IL <i>Regulation of Kinesin-5 motor protein function during mitosis</i> (short talk)
17:45 - 18:00	Ligon Lee - Rensselaer Polytechnic Institute, US <i>Microtubule reorganization and a switch in tubulin modification from detyrosination to acetylation as epithelial cells transition from 2D to 3D polarity</i> (short talk)
17:00 - 18:15	David Pastre - INSERM, FR <i>Polyamine: Microtubule interactions in the test tube and in cells</i> (short talk)
18:15 - 18:30	Yuyu Song - University of Illinois Chicago, US <i>Stabilisation of neuronal microtubules by polyamines and transglutaminase: its roles in brain function</i> (short talk)
19:00	Reception and Conference Dinner
Friday 8 October	
08:00	Breakfast and Departure

With support from:

