



EMBO Workshop “Molecular Neurobiology”

8-12 May 2018 | Crete, Greece

Programme

Tuesday, 8 May 2018

13:00	Registration opens
Molecular Models, Filaments and Environments	
14:30-16:30	Gael MCGILL [Harvard University and Digizyme Inc., Brookline, USA] <i>New Tools and Techniques for Visualizing Neuronal Molecular Landscapes (Presentations and practical)</i>
16:30-17:00	☕ Coffee break
17:00-19:00	Gael MCGILL [Harvard University and Digizyme Inc., Brookline, USA] <i>New Tools and Techniques for Visualizing Neuronal Molecular Landscapes (Presentations and practical)</i>
19:30	🍷 Dinner
21:00	🍷 Drinks at the bar – Cretan / Greek night – Music and Dancing!

Wednesday, 9 May 2018

Session 1: Adhesion and Polarity

09:00-10:00	Lecture 1: Nieng YAN [Tsinghua University, School of Medicine, Center for Structural Biology, Beijing, China] <i>Structural Investigation of Voltage-gated Na⁺ and Ca²⁺ Channels</i>
10:00-10:30	Christian SIEBOLD [Oxford University, Division of Structural Biology (STRUBI), Oxford, UK] <i>Structural Studies on Morphogen Signalling</i>
10:30-11:00	Rachelle GAUDET [Harvard University, MCB, Cambridge, USA] <i>Clustered Protocadherins as a Case Study in Evolution of Interaction Specificity</i>
11:00-11:30	☕ Coffee break & Group Photo
11:30-12:30	Hang up Posters & Free Time
12:30-14:00	🍷 Lunch
14:00-14:30	Larry SHAPIRO [Columbia University, New York, USA] <i>Clustered Protocadherins: Recognition, Diversity, and Function in Neuronal Self-avoidance</i>
14:30-15:00	Yimin ZOU [UC San Diego, Division of Biological Sciences, La Jolla, USA] <i>Breaking Symmetry — Planar Cell Polarity Signaling in Axon Guidance and Synapse Formation</i>
15:00-15:15	Tuhin BHOWMICK [European Molecular Biology Laboratory, Hamburg, Germany] <i>Draxin Recruits Netrin1 to DCC to Mediate Adhesion and Axon Guidance</i>
15:15-15:30	Verity JACKSON [MRC-LMB, Cambridge, UK] <i>Teneurin Structure: An Ancient Fold for Cell-cell Interaction</i>
15:30-15:45	Neil McDONALD [The Francis Crick Institute, Signalling and Structural Biology, London, UK] <i>Exploring GDNF-dependent Mechanisms of Neurotrophic Support and Cell Adhesion by Structural Biology</i>
15:45-16:15	☕ Coffee break
16:15-16:30	Thanos METAXAKIS [IMBB-FORTH, Heraklion, Greece] <i>Neuronal TOR Coordinates Mood and Cognition</i>
16:30-16:45	Robert HINDGES [King's College London, Centre for Developmental Neurobiology, London, UK] <i>Dendritic Structure of Teneurin 3 Positive Amacrine Cells is Critical to Generate Orientation Selectivity in the Vertebrate Retina</i>
16:45-17:15	Valerie CASTELLANI [Institute Neuromyogene, UCBL-CNRS UMR5310-INSERM U1217, Lyon, France] <i>Sequential Functionalization of Midline Repellents by Spatio-temporal Control of Receptor Dynamics during Commissural Axon Navigation</i>
17:15-18:30	Scientific Speed Dating
18:30-20:00	POSTER SESSION – RED SESSION - ODD NUMBERS
20:00	🍷 Dinner

Thursday, 10 May 2018




Session 2: Migration and Pathfinding

09:00-10:00	Lecture 2: Yvonne JONES [Oxford University, Division of Structural Biology (STRUBI), Oxford, UK] <i>The Mechanics of Semaphorin-plexin Cell Guidance Signalling</i>
10:00-10:30	Georgios SKINIOTIS [Stanford University, Department of Molecular and Cellular Physiology, Stanford, USA] <i>Single-particle CryoEM of G Protein-coupled Receptors</i>
10:30-11:00	Junichi TAKAGI [Osaka University, Department of Biological Sciences, Osaka, Japan] <i>Plexin Crosslinking by Divalent Artificial Binders differentially Controls its Signaling State</i>
11:00-11:30	☕ Coffee break
11:30-12:00	Bianxiao CUI [Stanford University, Department of Chemistry, Stanford, USA] <i>Optical Imaging and Optogenetic Manipulation of Axonal Transport in Neurons</i>
12:00-12:30	Dietmar SCHMUCKER [VIB-KU Leuven Center for Brain and Disease Research, Leuven, Belgium] <i>Molecular Mechanisms of Neurite Branching and Central Synapse Formation</i>
13:00-14:00	🍽️ Lunch
14:00-14:30	Chenghua GU [Harvard University, Department of Neurobiology, Boston, USA] <i>Transcytosis Regulation at the Blood-brain Barrier</i>
14:30-15:00	Frank BRADKE [DZNE, Axon Growth and Regeneration, Bonn, Germany] <i>Mechanisms of Axonal Growth and Regeneration</i>
15:00-15:30	Ruediger KLEIN [Max Planck Institute Neurobiology, Department of Molecules-Signaling-Development, Martinsried, Germany] <i>Cell Wrestling and Cortex Wrinkling - Guidance Mechanisms during Neural Development</i>
15:30-15:45	Katrin GERSTMANN [Institut NeuroMyoGène, University Lyon 1, Lyon, France] <i>The Dynamics of Apical Anchoring of Cortical Stem Cells is Balanced by a Dual CSF-derived Semaphorin/Neuropilinsignalling</i>
15:45-16:15	☕ Coffee break
16:15-16:30	Anna ZIEGLER [German Center for Neurodegenerative Disease (DZNE e.V., Bonn, Germany) <i>Role of Cell-autonomous Fatty Acid Synthesis for Neuronal Development and Function</i>
16:30-16:45	Shiri YANIV [Weizmann Institute of Science, Molecular Cell Biology, Rehovot, Israel] <i>Actin Dynamics is Important during Developmental Axon Regrowth</i>
16:45-17:00	Yarden OPATOWSKY [Bar-Ilan University, Ramat Gan, Israel] <i>SRGAP Truncations Confer Human Brain Advantages and Vulnerabilities</i>
17:00-17:15	Bert JANSSEN [Utrecht University, Bijvoet Center for Biomolecular Research, Utrecht, Netherlands] <i>Conformational and Oligomeric Rearrangements Control Intercellular Signaling</i>
17:15-17:45	Naoko MIZUNO [Max Planck Institute of Biochemistry, Martinsried, Germany] <i>Neuronal Cell Shape Formation Controlled by Cytoskeleton</i>
17:45-18:30	Free Time
18:30-19:30	POSTER SESSION – GREEN SESSION - EVEN NUMBERS
19:30	🍽️ Dinner

Friday, 11 May 2018


Session 3: Synapses and Signal Transmission I

09:00-10:00	Lecture 3: Jay GROVES [UC Berkeley, Department of Chemistry, Berkeley, USA] <i>Membrane-mediated RTK Signaling Crosstalk</i>
10:00-10:30	Pierre PAOLETTI [École Normale Supérieure, Department of Biology, Chemistry, Pharmacy, Paris, France] <i>Illuminating Glutamate Receptor Structure and Function</i>
10:30-11:00	Poul NISSEN [Aarhus University, Department of Molecular Biology and Genetics, Aarhus, Denmark] <i>Membrane Transporters of the Brain</i>
11:00-11:30	☕ Coffee break
11:30-12:00	Bernd FAKLER [Freiburg University, Institute of Physiology, Freiburg, Germany] <i>Cell Physiology of AMPA-receptors Determined by their Proteome</i>

12:00-12:30	Beatriz RICO [King's College London, MRC Centre – Developmental Neurobiology, London, UK] <i>Diverse Molecular Programs Orchestrating the Wiring of Inhibitory Circuitries</i>
13:00-14:00	 Lunch
14:00-14:30	Marina MIKHAYLOVA [Hamburg University, ZMNH, Hamburg, Germany] <i>Dendritic actin cytoskeleton: Structure, Functions and Regulations</i>
14:30-15:00	Stephan SIGRIST [Freie University Berlin, Department of Biology, Chemistry, Pharmacy, Berlin, Germany] <i>Active Zone Scaffold Proteins Tune Functional Diversity across Brain Synapses</i>
15:00-15:30	Scott BLANCHARD [Cornell University, Department of Physiology and Biophysics, New York, USA] <i>Single-molecule Analysis of Ligand Efficacy in β_2AR Receptor-G Protein Activation</i>
15:30-15:45	Nicole SCHOLZ [Rudolf Schönheimer Institute of Biochemistry, Faculty of Medicine, University of Leipzig, Leipzig, Germany] <i>Metabotropic Force Sensing through adhesion GPCRs</i>
15:45-16:00	Jone PAESMANS [Vrije Universiteit Brussel, Structural Biology, Brussels, Belgium] <i>Revealing the Function of TBC1D24 Mutations in Epilepsy and Related Neurological Diseases</i>
16:00-16:30	 Coffee break
16:30-18:00	Discussion on the future of Molecular Neurobiology <i>Role of Cell-autonomous Fatty Acid Synthesis for Neuronal Development and Function</i>
18:00-19:30	Group Photo
19:30	 Dinner

Saturday, 12 May 2018

Session 4: Synapses and Signal Transmission II

09:00-09:30	Valentin NÄGERL [Bordeaux University, Interdisciplinary Institute for Neuroscience, Bordeaux, France] <i>Super-resolution Imaging of Brain Extracellular Space</i>
09:30-10:00	Radu ARICESCU [MRC-LMB, Cambridge, UK] <i>Structural Insights into GABAA Receptor Gating Mechanisms</i>
10:00-10:15	Isabelle BRUNET [CIRB, Collège de France, INSERM, Paris, France] <i>EphrinA4/EphA4 Signaling in Arterial Innervation Development and Physiology: Arteries under Pressure?</i>
10:15-10:45	Jaewon KO [Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, South Korea] <i>PTPσ Drives Excitatory Presynaptic Assembly via Various Extracellular and Intracellular Mechanisms</i>
10:45-11:00	Pedro GUEDES-DIAS [University of Pennsylvania, Philadelphia, USA] <i>Local Microtubule Cues Specify Presynaptic Cargo Delivery at en passant Synapses</i>
11:00-11:15	Wenting GUO [Laboratory of Neurobiology, VIB, Center for Brain and Disease Research, KU Leuven-Stem Cell Institute (SCIL), Leuven, Belgium] <i>HDAC6 Inhibition Reverses Axonal Transport defects in Motor Neurons Derived from FUS-ALS Patients</i>
11:15-12:30	Poster Prizes and Coffee Break – End of Workshop
12:30	 Lunch