

PROGRAM

Cell Biology of the Neuron: Polarity, Plasticity and Regeneration Crete, May 2011

SATURDAY, May 7

- 10.00 - 13.00 Registration
13.00 - 14.00 *Lunch*
14.00 - 14.15 Opening Remarks

SESSION 1 SYNAPTOGENESIS

Chairperson: **Eckhard Gundelfinger** [Leibniz Institute of Neurobiology, Magdeburg]

- 14.15 - 14.45 *Molecular Mechanisms of Synapse Stabilization and Disassembly*
Graeme Davis [University of California, San Francisco]
14.45 - 15.15 *Long Term Dynamics of Inhibitory Synapses*
Ann Marie Craig [University of British Columbia, Vancouver]
15.15 - 15.45 *Dynamic Regulation of Synaptic Adhesion Complexes by Alternative Splicing*
Peter Scheiffele [Biozentrum of the University of Basel]
15.45 - 16.00 *Role of Leucine-Rich Repeat Containing Proteins in Excitator Synapse Development*
Joris de Wit [University of California San Diego]
16.00 - 16.30 *Coffee Break*

SESSION 2 NEURONAL PLASTICITY – RECEPTOR DYNAMICS

Chairperson: **Thomas Schwarz** [Harvard Medical School, Boston]

- 16.30 - 17.00 *A Nanoscale View into the Dynamic of AMPA Receptor Organization in Synapses*
Daniel Choquet [University of Bordeaux]
17.00 - 17.30 *Regulation of Neuronal Function and Dysfunction by Protein SUMOylation*
Jeremy Henley [University of Bristol]
17.30 - 18.00 *Intercellular Machinery and Signaling for AMPA Receptor Trafficking at Synapses*
Jose Esteban [Universidad Autonoma Madrid]
18.00 - 18.15 *Non Hyperpolarizing GABAB Receptors Regulate Neuronal Migration, and Axon/Dendrite Growth and Specification by cAMP Pathways*
Laura Cancedda [Italian Institute of Technology, Genova]
18.15 - 20.00 *Dinner*
20.00 - 21.00 Keynote Lecture 2:
Endocytic Mechanisms of Synapses
Pietro De Camilli [Yale University, New Haven]
21.00 - 23.00 Poster Session I – RED SESSION

SUNDAY, May 8

SESSION 3 NEURONAL REGENERATION

Chairperson: James Fawcett [University of Cambridge]

09.00 - 09.30 *Control of Motor Neuron Generation and Regeneration in Zebrafish*

Catherina Becker [University of Edinburgh]

09.30 - 10.00 *Nogo-A is a Negative Regulator of Neurite Growth in the Developing and Adult Nervous System*

Martin Schwab [University of Zurich]

10.00 - 10.30 *Defining the Genetic Program of Axon Regeneration in the CNS*

Zhigang He [Harvard Medical School, Boston]

10.30 - 10.45 *Regeneration of the Adult Zebrafish Brain after Traumatic Lesion: Neurogenic Radial Glial-Type Progenitor Cells make New Neurons*

Michael Brand [Dresden University]

10.45 - 11.15 *Coffee Break*

SESSION 4 LOCAL mRNA TRANSLATION

Chairperson: Rüdiger Klein [Max Planck Institute of Neurobiology, Martinsried]

11.15 - 11.45 *RNA-Based Control of Visual System Wiring*

Christine Holt [University of Cambridge]

11.45 - 12.15 *Identification of Localized mRNAs in Hippocampal Neurons*

Eric Schuman [Max Planck Institute of Brain Research, Frankfurt]

12.15 - 12.45 *CYFIP1, a Neuronal eIF4E-BP, Links Local Translational Regulation to Spine Remodeling Insights into Mental Retardation and Autism*

Claudia Bagni [Vesalius Research Center VIB, Leuven]

12.45 - 13.00 *CNP/cGMP Signaling Regulates Axon Branching and growth by Modulating Microtubule Dynamics*

Le Ma [University of Southern California, Los Angeles]

13.00 - 14.00 *Lunch*

SESSION 5 NEURONAL PLASTICITY - CYTOSKELETON

Chairperson: Carlos Dotti [Katholieke Universiteit Leuven]

14.15 - 14.45 *Regulating Synaptic Strength Across the Cleft by N-Cadherins*

Yukiko Goda [University College London]

14.45 - 15.15 *Presynaptic Tenacity: Insights from Live Imaging Experiments*

Noam Ziv [Technion Faculty of Medicine, Haifa]

15.15 - 15.45 *Class-Specific Dendrite Morphology Control by the Actin Bundling Protein Fascin*

Gaia Tavosanis [Max Planck Institute of Neurobiology, Martinsried]

15.45 - 16.00 *EB3 Stably Links Microtubules to Ankyrin G in the Axon Initial Segment*

Christophe Leterrier [INSERM U641, Marseille]

16.00 - 18.00 *Coffee Break & Poster Session II – GREEN SESSION*

18.00 - 19.30 *Dinner*

19.30 - 20.30 Keynote Lecture 2:
Neurogenesis from Glial Cells – Novel Sources for New Neurons in the Adult Brain
Magdalena Götz [Helmholz Zentrum München]

20.30 *Wine & Beer*

MONDAY, May 9

SESSION 6 NEURONAL POLARITY

Chairperson: **Yishi Jin** [University of California, San Diego]

09.00 - 09.30 *Establishment of Neuronal Polarity*
Carlos Dotti [Katholieke Universiteit Leuven]

09.30 - 10.00 *Molecular Mechanisms Underlying Neuronal Polarization in vivo*
Franck Polleux [The Scripps Research Institute, La Jolla]

10.00 - 10.30 *Neurotrophin Regulate Neuronal Polarity Acting through Ca²⁺ and CaMKK*
Kozo Kaibuchi [Nagoya University]

10.30 - 10.45 *ADF/Cofilin Directs Neuritogenesis in the Developing Mammalian Brain*
Kevin Flynn [Max Planck Institute of Neurobiology, Martinsried]

10.45 - 11.15 *Coffee Break*

SESSION 7 AXON GROWTH AND REGENERATION

Chairperson: **Farida Hellal** [Max Planck Institute of Neurobiology, Martinsried]

11.15 - 11.45 *Lpd Depletion Reveals a Novel SRF-Dependent Function that Specifies Radial Versus Tangential Migration of Bipolar Pyramidal Neurons*
Frank B. Gertler [Koch Institute for Integrative Cancer Research at MIT]

11.45 - 12.15 *Enhancing the Regenerative Ability of Axons*
James Fawcett [University of Cambridge]

12.15 - 12.45 *Signaling Axonal Regeneration in the CNS*
Marie Filbin [Hunter College, New York]

12.45 - 13.00 *The Oriented Emergence of Axons from Retinal Ganglion Cells is Directed by Laminin Contact in vivo*
Owen Randlett [University of Cambridge]

13.00 - 14.00 *Lunch*

14.00 - 16.15 *Coffee Break & Poster Session III – BLUE SESSION*

16.15 - 17.15 Keynote Lecture 3:
Dendrite Morphogenesis and Functional Implications
Yuh-Nung Jan [University of California, San Francisco]

17.15 - 17.45 *Coffee Break*

SESSION 8 HOT-TOPIC SESSION

Chairpersons:	Lukas Kapitein [Utrecht University, Utrecht] & Eleanor Coffey [Turku Centre for Biotechnology]
17.45 - 18.00	<i>The Role of Diverse Surface Receptor Complexes in Controlling Axonal Branching</i> Dietmar Schmucker [Vesalius Research Center VIB, Leuven]
18.00 - 18.15	<i>Controlling Axonal Polarization using Micropatterns</i> Mariano Bisbal [Université Joseph Fourier, Grenoble]
18.15 - 18.30	<i>Characterization of Voltage and Temperature Dependent Gating of Channelrhodopsin 2, and Application in a Dispersed Hippocampal Culture Paradigm</i> Thomas Chater [University of Bristol]
18.30 - 18.45	<i>Small Heat Shock Proteins Protect Against Neurodegeneration</i> Nikos Kourtis [Institute of Molecular Biology and Biotechnology – FORTH, Heraklion]
18.45 - 19.00	<i>Identification of the Nogo Receptor Family Members NgR1 and NgR3 as CSPG Receptors: Evidence for a Mechanistic Link between CNS Myelin- and CSPG-Mediated Growth Inhibition</i> Travis Lee Dickendesher [University of Michigan]
19.00 - 19.15	<i>Axonal and Synaptic Degeneration is Regulated by the Hiw E3 Ubiquitin Ligase and Conditioning Lesion</i> Catherine Collins [University of Michigan]
19.15 - 19.30	<i>A Growth-Inhibitory Proteoglycan Activates Atypical PKC and Modifies Par Complex Function</i> Joel Levine [Stony Brook University, New York]
19.30 - 19.45	<i>MyosinV-Dependent Transport of PTEN Regulates PI3K Signaling and Neuronal Morphogenesis</i> Britta Eickholt [King's College London]
19.45	<i>Dinner & Party</i>

TUESDAY, May 10**SESSION 9 NEURONAL TRAFFICKING**

Chairperson:	Jose Esteban [Universidad Autonoma Madrid]
09.00 - 09.30	<i>Huntington's Disease: Huntington and the Control of Cellular Dynamics</i> Frederic Saudou [Centre Universitaire, Institut Curie, Orsay]
09.30 - 10.00	<i>Regulating Mitochondrial Motility</i> Thomas Schwarz [Harvard Medical School, Boston]
10.00 - 10.30	<i>Rapid Trafficking of GABAA Receptors and the Tuning of Inhibitory Transmission</i> Josef Kittler [University College of London]
10.30 - 10.45	<i>From Soma to Synapse: Sorting out Polarized Transport in Neurons</i> Lukas Kapitein [Utrecht University, Utrecht]
10.45 - 11.15	<i>Coffee Break</i>

SESSION 10 SYNAPTOGENESIS

Chairperson: **Peter Scheiffele** [Biozentrum of the University of Basel]

11.15 - 11.30 *Ion-Flux Independent NMDA Receptor Function is required for A β -Induced Synaptic Depression*

Helmut Kessels [The Netherlands Institute of Neuroscience, Amsterdam]

11.30 - 12.00 *Homeostatic Plasticity of the Presynapse Extensive Remodeling of the Cytomatrix at the Active Zone upon Prolonged Network Silencing*

Eckart Gundelfinger [Leibniz Institute of Neurobiology, Magdeburg]

12.00 - 12.30 *Shedding light on the Assembly of Synapse Structure and Function*

Stefan Sigrist [Freie Universität Berlin]

12.30 - 13.00 *Axon Regeneration in *C. elegans**

Yishi Jin [University of California, San Diego]

13.00 - 13.15 Closing, short feedback on conference

13.15 *Lunch*