

PROGRAMME

INTERNATIONAL CELL PHYSIOLOGY & ENGINEERING MEETING



12TH YOUNG NEUROSCIENTISTS MEETING



ADVANCED MICROSCOPY WORKSHOP

May 26th – 29th 2005

Hotel Maestoso Lipica, Slovenija

Thursday, May 26th 2005

16:00 - 19:00 REGISTRATION AT THE HOTEL MAESTOSO, LIPICA

19:00 GET TOGETHER & WELCOME

20:00 SOCIAL DINNER

Friday, May 27th 2005

08.15 **Opening**

GLIAL CELLS AND NERVE CELLS I

Chair: Tine Valentinčič

- 08.30-08.55 **A. Nistri:** Electrical oscillations of brainstem motoneurons: a novel system of motor synchronization
- 08.55-09.10 **G. Taccola:** Electrical oscillations induced by the potassium channel blocker 4-aminopyridine in the dorsal horn of the rat spinal cord and their relation to fictive locomotor patterns
- 09.10-09.35 **P. Haydon:** Gliotransmission coordinates synaptic networks
- 09.35-09.50 **M. Potokar:** Cytosolic Ca²⁺ and cytoskeleton in vesicle mobility of rat astrocytes
- 09.50-10.05 **T. Pangršič:** Surface and volume measurements in cultured astrocytes during hypotonic swelling
- 10.05-10.30 **E. Cherubini:** Silent synapses: their role in synaptic plasticity
- 10.30-10.45 **K. Ostroumov:** K-ATP channel blockers modulate synaptic and bursting activity in the rat spinal cord in vitro

10.45-11.15 Coffee break

GLIAL CELLS AND NERVE CELLS II

Chair: Tom Finger

- 11.15-11.40 **S. Tobet:** Development of the hypothalamus
- 11.40-12.05 **G. Majdič:** SF-1 knockout mice as a model for hormone independent sexual differentiation
- 12.05-12.20 **N. Grgurevič:** Sexual and aggressive behavior in mice with disruption of the steroidogenic factor - 1 gene
- 12.20-12.35 **T. Budefeld:** Sex differences in AgRP, VP, Calbindin and nNOS immunoreactivity in mice brain
- 12.35-12.50 **G. Baj:** Have the different BDNF mRNA isoforms a role in neuroblastoma tumour cells survival?
- 12.50-13.05 **F. Minnici:** Electrophysiological characterization of a subset of somatostatin-containing, EGFP positive GABAergic interneurons in organotypic hippocampal cultures
- 13.05-13.20 **V. Stoka:** Mechanisms of activation and regulation of the intrinsic pathway of apoptosis during brain development and aging
- 13.20-13.35 **A. Omrani:** Consequences of Pentylentetrazole kindling on spatial learning and memory

13.35-15.00 Lunch break

ENDOCRINE, MUSCLE CELLS and ADIPOCYTES

Chair: Gregor Majdič

- 15.00-15.25 **F. Ruzzier:** Satellite stem cells, myogenesis and ageing
- 15.25-15.40 M. Jurdana: Small-conductance Ca²⁺- activated K⁺ channels in cultured skeletal muscle cells: their role in spontaneous activity and possible regulation by nerve-derived factors
- 15.40-16.05 **H. Chowdhury:** Insulin responses of single adipocytes
- 16.05-16.30 **R. Zorec:** Pituitary cells: molecular mechanisms of exocytosis
- 16.30-16.45 N. Vardjan: Spontaneous exocytotic events in isolated lactotrophs
- 16.45-17.00 A. Fabbro: PC12 cells as a model to study quantal release of ATP
- 17.00-17.15 S.B. Yang: KATP-channels in beta-cells in tissue slices are directly modulated by millimolar ATP
- 17.15-17.30 T. Rose: Ca²⁺-secretion coupling in β -cells of healthy and diabetic rats

17.30-18.00 Coffee break

SENSORY CELLS

Chair: Marjan Rupnik

- 18.00-18.25 **A. Menini:** Transduction and adaptation in olfactory sensory neurons
- 18.25-18.50 **K. Sugimoto:** Mechanisms for transduction and modulation of sweet taste in mouse taste cells
- 18.50-19.15 **S. Kinnamon:** Ca signalling and neurotransmitter release in taste buds
- 19.15-19.40 **T. Finger:** When taste is not taste and smell is not smell: solitary chemosensory cells of the airways and larynx
- 19.40-20.05 **T. Valentinčič & P. Miklavc:** Does chemotopy predict olfactory discrimination in zebrafish (*Danio rerio*)?
- 20.05-20.20 K. Pliberšek: Connections between regenerated olfactory epithelium and olfactory bulb in black bullhead catfish (*Ameiurus melas*)
- 20.20-20.35 J. Dolenshek: Electrophysiological responses of silent olfactory receptor neurons to amino acids in black bullhead catfish

21.00 Dinner

Saturday, 28th May 2005

GLIAL CELLS AND NERVE CELLS III

Chair: Sue Kinnamon

- 08.30-08.55 **N. Reist:** Mutational analysis of synaptic protein function
- 08.55-09.20 **R. Giniatullin:** The role of ATP in pain mechanisms
- 09.20-09.35 M. Simonetti: Immunocytochemical mapping of pain transducing receptors in rodent trigeminal ganglia
- 09.35-09.50 E. Fabbretti: Molecular determinants of the function of pain transducing P2X3 receptors
- 09.50-10.05 F. Furlan: Interneurons transiently express the ERG K⁺ channels during development of mouse spinal networks in vitro
- 10.05-10.20 V. Safiulina: ATP controls the generation of network-driven giant depolarizing potentials in the neonatal rat hippocampus
- 10.20-10.35 E. Sola: Nicotinic modulation of glutamatergic transmission at Schaffer collateral-CA1 synapses in a mouse model of Alzheimer's disease
- 10.35-10.50 E. Sharifullina: Glutamate induces a novel bursting activity within rat brainstem slice networks
- 10.50-11.05 C. Le Magueresse: Nicotine-induced enhancement of evoked glutamate release at CA3-CA1 synapses in the rat hippocampus: role of calcium-induced calcium release

11.05-11.35 Coffee break

CELL ENGINEERING (OSTEOID C., CHONDROCYTES, IMMUNE C.)

Chair: Marko Kreft

- 11.35-12.00 **M. Jeras:** Dendritic cell-based vaccines as inducers of anti-tumor immune responses
- 12.00-12.15 M. Gabrijel: Measurements of the extent of lysosomal fusion in electrofused hybrid cells
- 12.15-12.30 K. Trontelj: Cell electrofusion in vitro
- 12.30-12.55 **N. Kregar Velikonja:** Tissue engineering approaches in cartilage regeneration
- 12.55-13.20 **B. Sotošek:** Reconstruction of bone defects with tissue engineered autologous osteoid cells
- 13.20-13.35 S. Bembich: Antigen phage display libraries for the identification of autoantigens candidate in multiple sclerosis

13:35-16:50 Lunch followed by the visit of "Černigoj Gallery" and the Lipica Stud Farm

ADVANCED MICROSCOPY WORKSHOP

Chair: Robert Zorec

- 16.50-17.15 **M. Krefc:** Confocal microscopy in Cell Physiology and Bioengineering
- 17.15-17.40 **M. Stenovec:** Regulated exocytosis in astrocytes studied by confocal microscopy
- 17.40-18.05 **I. Poberaj:** Laser tweezers
- 18.05-18.30 **M. Rupnik:** Two photon microscopy
- 18.30-18.45 N. Žnidaršič: Microscopic and biochemical survey of copper storage in hepatopancreatic S cells
- 18:45-19:45 Posters (with Vine & Cheese)
- 20:00 Bus departure to gostilna Kraški hram

21.00 Gala Dinner

Sunday, 29th May 2005

- 09.00-10.00 DISCUSSION FORUM
- 10.30- EXCURSION TO KARST CAVES