

Inhibitory Control of Brain Plasticity

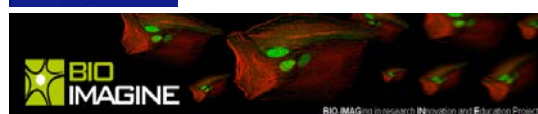
Bio-imaging Methods Reveal Brain Physiology



EU-sponsored



Research Conference, Krakow,
Poland, 5-7 September 2013



Conference Program

5.09, Thursday	
14:00	Conference opening
	Session I Chair – Marian Lewandowski, Krzysztof Wędzony Keynote lecture:
14:00 - 15:00	Peter Somogyi , University of Oxford, United Kingdom <i>Behaviour-dependent GABA release to hippocampal pyramidal cells</i>
15:00 - 15:30	Jerzy Mozrzymas , Wrocław Medical University, Poland <i>Synaptic agonist transient and binding-gating cross-talk – powerful determinants of GABAergic synapse function</i>
15:30 - 16:00	Malgorzata Skup , Nencki Institute of Experimental Biology, Warsaw, Poland <i>GABAergic contribution to inhibitory deficits after spinal cord injury: the effects of BDNF treatment on GABAergic signaling</i>
16:00 - 16:30	Coffee break
	Session II Chair – Marian Lewandowski, Krzysztof Wędzony Keynote lecture:
16:30 - 17:00	Wolf Singer , Max Planck Institute for Brain Research, Frankfurt, Germany <i>The changing face of inhibition: From gain control to the backbone of dynamic coordination</i>
17:00 - 17:30	Jan Konopacki , University of Lodz, Poland <i>Gap junctions and rhythmic oscillations in the limbic cortex</i>
17:30 - 18:00	Karri Lamsa , University of Oxford, United Kingdom <i>Long-term plasticity in excitatory connections onto hippocampal GABAergic interneurons in acute brain slices and in urethane anesthetized rat</i>
19:00	Welcome reception (Collegium Maius)

6.09, Friday	
	Session III Chair – Jolanta Skangiel-Kramska, Grzegorz Hess
09:00 - 09:45	Michael Stryker , University of California, San Francisco, USA <i>Mechanisms of plasticity of visual cortex after transplantation of embryonic inhibitory neurons</i>
09:45 - 10:30	Istvan Katona , Institute of Experimental Medicine, Budapest, Hungary <i>Endocannabinoid-mediated regulation of synaptic plasticity</i>
10:30 - 11:00	Malgorzata Kossut , Nencki Institute of Experimental Biology, Warsaw, Poland <i>GABAergic contribution to learning-dependent brain plasticity</i>
11:00 - 11:30	Coffee break
11:30 - 12:15	Lamberto Maffei , Accademia Nazionale del Lincei, Rome, Italy <i>Plasticity, environment and endogenous pharmacology</i>
12:15 - 12:45	Monika Liguz-Lecznar , Nencki Institute of Experimental Biology, Warsaw, Poland

	<i>GABA-dependent plasticity in the aging brain</i>
12:45 - 14:00	Lunch
14:00 - 16:00	Poster session, Coffee break
	Session IV Chair – Elżbieta Pyza, Leszek Kaczmarek Bioimaging session: imaging brain plasticity
16:00 - 16:45	Elly Nedivi , MIT, USA <i>In vivo imaging of coordinated excitatory and inhibitory synaptic dynamics in the visual cortex</i>
16:45 - 17:30	Antoine Triller , INSERM, Paris, France <i>Plasticity of inhibitory synapses: quantitative nanoscopy and physical chemistry of receptor scaffold interactions</i>
17:30 - 18:15	Carl Petersen , Brain Mind Institute Lausanne, Switzerland <i>Gating of sensory perception by neocortical GABAergic neurons</i>

07.09, Saturday	
	Session V Chair – Irena Nalepa, Władysław Lason
09:00 - 09:45	Jean Marc Fritschy , University of Zurich, Switzerland <i>GABA_A receptors regulating adult neurogenesis</i>
09:45 - 10:30	Takao Hensch , Harvard University, USA <i>Lifting brakes on adult brain plasticity</i>
10:30 - 10:45	Coffee break
10:45 - 11:30	Kai Kaila , University of Helsinki, Finland <i>Ionic plasticity of GABAergic signaling</i>
11:30 - 12:00	Adam Plaznik , Institute of Psychiatry and Neurology, Warsaw, Poland <i>Why do rats differ in the strength and persistence of learned fear?</i>
12:00 - 12:45	Enrico Cherubini , SISSA, Trieste, Italy <i>GABAergic signaling at immature mossy fibers-CA3 synapses: regulation by endocannabinoids</i>
13:00 - 14:00	Lunch
	Short communications - selected from the abstracts
	Abstract 13 Klaus Funke , Neurophysiology, Ruhr-University Bochum, Germany <i>Modulation of inhibition in cortical processing of sensory activity by repetitive transcranial magnetic stimulation (rTMS)</i>
14:00 - 15:00	Abstract 34 Thomas Mittmann , , Institute of Physiology, UMC of the Johannes-Gutenberg University Mainz, Germany <i>Homeostatic regulation of GABAergic synaptic transmission following focal cortical lesions</i>
	Abstract 11 Laura Cancedda , , Neuroscience and Brain Technologies, Italian Institute of Technology, Italy <i>Early depolarizing GABA controls critical period plasticity in the rat visual cortex</i>
	Abstract 25 Alice Polenghi , , Neuroscience and Brain Technologies, Fondazione Istituto Italiano di Tecnologia, Italy <i>Excitatory activity-dependent regulation of synaptic GABA_A receptor lateral mobility probed with optogenetic tools.</i>
15:00 - 16:30	Round table discussion Chairs: Jerzy Vetulani, Enrico Cherubini, Elly Nedivi

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