11th INTERNATIONAL CONGRESS OF THE POLISH NEUROSCIENCE SOCIETY

Poznań, Poland, September 15-17

www.ptbun.org.pl
Organizer: Polish Neuroscience Society (PNS)

Co-organizers: Department of Neurobiology, University School of Physical Education in Poznań
Committee of Neurobiology of Polish Academy of Sciences
Committee of Rehabilitation, Physical Education and Social Integration of Polish Academy of Sciences
Faculty of Physical Education, Sport and Rehabilitation, University School of Physical Education in Poznań
Faculty of Animal Breeding and Biology, Poznań University of Life Sciences
Poznań University of Medical Sciences
Adam Mickiewicz University in Poznań
International Institute of Molecular and Cell Biology, Warszawa
Nencki Institute of Experimental Biology, PAS, Warszawa
Institute of Pharmacology, PAS, Kraków
Mossakowski Medical Research Centre, PAS, Warszawa

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Vice-chairpersons: Jan Celichowski
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Members: Julita Czarkowska-Bauch
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Andrzej Szutowicz
Wioletta Waleszczyk
Daniel Wójcik

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11th International Congress of the Polish Neuroscience Society

Programme

Sunday, September 15th

12:00 PM – 06:00 PM
Registration

02:00 PM – 04:00 PM
General Assembly of the Polish Neuroscience Society

04:30 PM – 05:00 PM
Opening ceremony

05:00 PM – 06:45 PM
Opening lectures

Bogdan Dreher (University of Sydney, Australia)
Primary visual cortex – receptive field properties and feedforward and feedback inputs
Introduced by: Wioletta Waleszczyk

Robert F. Schmidt (University of Würzburg, Germany)
From nociceptor to chronic pain
Introduced by: Maciej Pawlak

06:45 PM – 09:00 PM
Welcome reception

Monday, September 16th, 2013
(Morning sessions)

08:15 AM – 08:45 AM
Konorski Award presentation
Marcin P. Mycko, Maria Cichalewska, Agnieszka Machlańska, Hanna Ćwiklińska, Magdalena Mariasiewicz, Krzysztof W. Selmaj
microRNA-301a regulation of a T-helper 17 immune response controls autoimmune demyelination
Introduced by: Jolanta Zawilska

08:45 AM – 09:30 AM
Plenary lecture
Marc D. Binder (University of Washington, Seattle, USA)
The role of voltage-gated calcium channels in regulating the excitability and discharge behavior of motoneurons
Introduced by: Jan Celichowski

09:30 AM – 10:00 AM
Coffee break

10:00 AM – 10:45 AM
Special lectures
Caroline Blanchard (University of Hawaii at Manoa, USA)
Autism and the SVZ: A site for mechanism?
Introduced by: Ksenia Meyza

Erik De Schutter (Okinawa Institute of Science and Technology, Japan)
Data sharing and data publication
Introduced by: Daniel Wójcik

11:00 AM – 01:00 PM
Symposia
S1. Neurophysiological and molecular mechanisms of pain
Chairperson: Joanna Mika (Kraków, Poland)
Hans-Georg Scheible (Jena, Germany)
The bidirectional joint – brain connection: Pain mechanisms and neuronal control of inflammation
Katarzyna Starowicz (Kraków, Poland)
Novel pharmacotherapy of osteoarthritis: TRPV1 and CB1 receptors as targets for pharmacological intervention
Programme

Joanna Mika (Kraków, Poland)
Spinal microglia activation – importance for chronic pain

Karl Messlinger (Erlangen, Germany)
Neurobiological mechanisms in migraine

Maciej Pawlak (Poznań, Poland)
Aspects of pain in sport and physiotherapy

S2. Synaptic plasticity and neuronal environment
Chairperson: Jerzy Mozrzymas (Wrocław, Poland)
Enrico Tongiorgi (Trieste, Italy)
BDNF proteolytic products: Diversity of effects on cellular plasticity
Leonard Khiroug (Helsinki, Finland)
Activity-dependent motility of perisynaptic astrocytic processes: Links to functional synaptic plasticity
Leszek Kaczmarek (Warszawa, Poland)
MMP-9, an extracellular protease in control of synaptic plasticity
Jerzy Mozrzymas (Wrocław, Poland)
Impact of metalloproteases on synaptic and E-S plasticity in the hippocampal mossy fiber-CA3 and AC pathways

S3. Across experimental and clinical neurophysiology
Chairperson: Juliusz Huber (Poznań, Poland)
Barbara Emeryk-Szajewska (Warszawa, Poland)
Electrophysiological diagnostics of myasthenia and myasthenic syndromes
Ryszard Kinański (Białystok, Poland)
Interhemispheric asymmetry of the N20 subcomponent latency: New parameter of median nerve somatosensory evoked potentials in healthy adults
Juliusz Huber (Poznań, Poland)
Application of surface electromyography in diagnostics of muscles motor units dysfunction during overloading and in standing positions

01:00 PM – 02:30 PM
Lunch

Monday, September 16th, 2013
(Afternoon sessions)

02:30 PM – 04:30 PM

SYMPOSIA

S4. Cortico-subcortical interactions in different behavioural states
Chairperson: Andrzej Wróbel (Warszawa, Poland)
Andrzej Wróbel (Warszawa, Poland)
Introduction
Daniel Świejkowski (Oxford, UK)
Brain state-related activity of septo-hippocampal neuronal network
Björn Granseth (Linkoping, Sweden)
Cortico-thalamic modulatory pathway
Wioletta Waleśczyk (Warszawa, Poland)
Cortical determination of temporal structure of spike trains in the cat’s lateral geniculate and perigeniculate nuclei
Ewa Kublik (Warszawa, Poland)
State related changes of information flow in thalamo-cortical pathways

S5. Bioactive lipids and mitochondria: Key players in the pathogenesis of Alzheimer’s disease (AD)
Chairperson: Joanna B. Strosznajder (Warszawa, Poland)
Kristina Leuner (Erlangen, Germany)
Mitochondrial dysfunction – the missing link between aging and sporadic AD?
Anne Eckert (Basel, Switzerland)
Targeting mitochondria in Alzheimer’s disease: Effects of omega 3 fatty acids
Walter Lukiew (New Orleans, USA)
Micro-RNA-125b (miRNA-125b) regulation of 15-lipoxygenase (15-LOX) expression and
the generation of NP1 from DHA: A potential contributor to the pathogenesis of Alzheimer’s
disease (AD)
Robert P. Strosznajder (Warszawa, Poland)
Ceramide/sphingosine-1-phosphate in cells survival and death: Implication in Alzheimer’s disease

S6. Neurobiology of invertebrates
Chairperson: Joanna Śliwowska (Poznań, Poland)
Nathan Tublitz (Eugene, USA)
Neural control of body patterning in cephalopods: From behavior to genomics
Elżbieta Pyza (Kraków, Poland)
The role of BRP protein in synaptic plasticity in the visual system of Drosophila
Dick Nääsel (Stockholm, Sweden)
Neurotransmitters and other factors regulating insulin producing cells in the Drosophila brain
Christian Wegener (Würzburg, Germany)
Biology of neuropeptide processing and production in the fruitfly Drosophila
Bruno Lapied (Angers, France)
Regulatory mechanisms of Periplaneta americana nervous system functions

04:30 PM – 05:00 PM
Coffee break

05:00 PM – 05:15 PM
Young Investigator Award presentation
Paulina Kaźmierska (Łódź, Poland)
5-HT₁A receptors are involved in the development of theta oscillations in hippocampal formation
in vitro
Introduced by: Małgorzata Skup

05:15 PM – 06:00 PM
Plenary lecture
Laszlo Acsady (Hungarian Academy of Sciences, Budapest, Hungary)
Building blocks of the thalamus
Introduced by: Andrzej Wróbel

06:00 PM – 08:00 PM
POSTER SESSION 1

Tuesday, September 17th, 2013
(Morning sessions)

09:00 AM – 09:15 AM
Young Investigator Award presentation
Magdalena Śmyk (Kraków, Poland)
Old rhythm, new methodology: Differential temporal organization of sleep-wake states in the
light and dark phase
Introduced by: Małgorzata Skup

09:15 AM – 10:00 AM
Plenary lecture
Giacomo Rizzolatti (University of Parma, Parma, Italy)
The mirror neuron system
Introduced by: Grzegorz Króliczak

10:00 AM – 10:30 AM
Coffee break
10:30 AM – 12:30 PM
SYMPOSIA
S7. Higher order motor control and recovery of functions
Chairperson: Ferdinand Binkofski (Aachen, Germany)
Ferdinand Binkofski (Aachen, Germany)
Action observation as a tool for neurorehabilitation of motor deficits following stroke
Giovanni Buccino (Catanzaro, Italy)
The mirror system in humans, motor learning and recovery of function
Leonardo Fogassi (Parma, Italy)
Encoding motor intention in monkey parietal and premotor cortex
Grzegorz Króliczak (Poznań, Poland)
Task-dependent dissociations between transitive and intransitive gesture representations:
The prospects of recovery following right vs. left hemisphere lesions

S8. Neurobiology of autism
Chairperson: Ewelina Knapska (Warszawa, Poland)
Alena Savonenko (Baltimore, USA)
Mutations of Shank3 in autism and mouse models
Markus Wöhr (Marburg, Germany)
Autism as a synaptopathy: Behavioral studies in genetic mouse models
Ksenia Meyza (Warszawa, Poland)
Extracellular matrix alterations in BTBR mouse model of autism
Tomasz Schneider (Oxford, UK)
Animal model of autism induced by prenatal exposure to valproic acid: Translational validity

Tuesday, September 17th, 2013
(Afternoon sessions)

02:00 PM – 04:00 PM

SYMPOSIA
S9. RNA binding proteins, microRNAs and local protein synthesis in nervous system function
Chairperson: Jacek Jaworski (Warszawa, Poland)
Gary Bassell (Atlanta, USA)
Dynamic regulation of mRNA translation in neurons by FMRP and microRNAs
Clive Bramham (Bergen, Norway)
Persistent TrkB signaling to MNK activates a two-stage translational switch underlying in vivo LTP maintenance
Gerhard Schratt (Marburg, Germany)
microRNA function in synapse development and plasticity
Jacek Jaworski (Warszawa, Poland)
Ribonucleoparticles in dendritic arbor development

S10. Recovery of the brain function after stroke
Chairperson: Wioletta Wałęszczyk (Warszawa, Poland)
Turgut Tatlisumak (Helsinki, Finland)
Visual field defects in patients with ischemic stroke: Characteristics, consequences, and acute management
Carolin Gall (Magdeburg, Germany)
Non-invasive brain stimulation in vision impairment after stroke: The REVIS network
Monika Liguz-Lecznar (Warszawa, Poland)
Attenuation of inflammatory response after stroke allows to retain brain plasticity
Paolo M. Rossini (Roma, Italy)
Neurophysiological techniques testing brain connectivity
S11. A CARE lecture
Krzysztof Turlejski (Warszawa, Poland)
Ethical and legal aspects of experimenting on animals

04:00 PM – 04:30 PM
Coffee break

04:30 PM – 04:45 PM
Young Investigator Award presentation
Patrycja Orlowska (Kraków, Poland)
Melanopsin modulation of slow oscillatory activity in the subcortical visual system
Introduced by: Małgorzata Skup

04:45 PM – 05:30 PM
Plenary lecture
Bernhard Sabel (Otto-v.-Guericke Universität Magdeburg, Germany)
Vision restoration after brain and retina damage: The “residual vision activation” theory
Introduced by: Wioletta Waleszczyk

05:30 PM – 05:45 PM
Closing Ceremony

05:45 PM – 07:45 PM
POSTER SESSION II

08:30 PM – 12:00 AM
Gala dinner