

September 7, 2015 Lunch poster session

**Poster session P1. Amyloid-beta**

**P1.1**

**THE MOLECULAR NETWORK BETWEEN AMYLOID B PEPTIDE, SPHINGOSINE KINASE AND SIRTUINS IN CELL SURVIVAL AND DEATH. IMPLICATION IN ALZHEIMER'S DISEASE**

**Joanna Strosznajder<sup>1</sup>, Grzegorz Czapski<sup>1</sup>, Magdalena Cieřlik<sup>1</sup>**

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**P1.2**

**GENE EXPRESSION PROFILES FOR MITOCHONDRIA SIRTUINS AND POLY(ADP-RIBOSE) POLYMERASES IN AMYLOID BETA TOXICITY**

**Robert Strosznajder<sup>1</sup>, Przemysław Wencel<sup>1</sup>**

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**P1.3**

**ALTERATIONS IN APOPTOTIC SIGNALING IN LYMPHOCYTES OF PATIENTS IN THE EARLY STAGE OF ALZHEIMER'S DISEASE PRECEDE MASSIVE NEURONAL LOSS IN THE BRAIN**

**Joanna Wojsiat<sup>1</sup>, Katarzyna Laskowska-Kasub<sup>1</sup>, Monika Mandecka<sup>2</sup>, Tomasz Gabryelewicz<sup>2</sup>, Jacek Kuźnicki<sup>3</sup>, Urszula Wojda<sup>1</sup>**

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**P1.4**

**THE APOE GENOTYPE AND THE PLASMA EXPRESSION OF MICRORNA-107, -132 AND -138 IN PATIENTS WITH ALZHEIMER'S DISEASE - PRELIMINARY STUDY**

**Michał Predecki<sup>1</sup>, Jolanta Florczak-Wyspiańska<sup>2</sup>, Urszula Łagan-Jędrzejczyk<sup>1</sup>, Anna Płóciennik<sup>1</sup>, Wojciech Kozubski<sup>2</sup>, Jolanta Dorszewska<sup>1</sup>**

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**P1.5**

**DIMETHYL FUMARATE ALLEVIATES REFERENCE MEMORY IMPAIRMENT AND MODULATES BRAIN-DERIVED NEUROTROPHIC FACTOR EXPRESSION IN STREPTOZOTOCIN-INDUCED RAT MODEL OF ALZHEIMER DISEASE**

**Ewelina Kurowska<sup>1</sup>, Irena Majkutewicz<sup>1</sup>, Dorota Myślińska<sup>1</sup>, Beata Grembecka<sup>1</sup>, Maria Grzybowska<sup>1</sup>, Magdalena Podlacha<sup>1</sup>, Jan Ruciński<sup>1</sup>**

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**P1.6**

**PHARMACOLOGICAL INHIBITION OF CYCLIN-DEPENDENT KINASE 5 MODIFIES GENE EXPRESSION IN MOUSE MODEL OF AMYLOID BETA TOXICITY**

**Grzegorz A. Czapski**<sup>1</sup>, Anna Wilkaniec<sup>1</sup>, Magdalena Gąssowska<sup>1</sup>, Agata Adamczyk<sup>1</sup>

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**P1.7**

**DIMETHYL FUMARATE PREVENTS SPATIAL WORKING MEMORY IMPAIRMENT AND DOES NOT AFFECT BRAIN IL-6 EXPRESSION IN STREPTOZOTOCIN-INDUCED RAT MODEL OF ALZHEIMER DISEASE**

**Irena Majkutewicz**<sup>1</sup>, Ewelina Kurowska<sup>1</sup>, Dorota Myślińska<sup>1</sup>, Beata Grembecka<sup>1</sup>, Maria Grzybowska<sup>1</sup>, Magdalena Podlacha<sup>1</sup>, Jan Ruciński<sup>1</sup>

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**P1.8**

**BEYOND AMYLOID: ALTERED CELL CYCLE REGULATION IN ALZHEIMER'S DISEASE: COMPARISON OF P21 SIGNALING IN PATIENTS' LYMPHOCYTES AND BRAIN NEURONS**

**Anna Mietelska-Porowska**<sup>1</sup>, Joanna Wojsiat<sup>1</sup>, Katarzyna Laskowska-Kaszub<sup>1</sup>, Tomasz Stępień<sup>2</sup>, Teresa Wierzba-Bobrowicz<sup>2</sup>, Urszula Wojda<sup>1</sup>

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**P1.9**

**BLOOD AND CEREBROSPINAL FLUID BIOMARKERS IN ALZHEIMER'S AND PARKINSON'S DISEASES**

**Martyna Siudak**<sup>1</sup>, Marta Ziętek<sup>1</sup>, Anna Tober-Marczewska<sup>2</sup>, Andrzej Borman<sup>1</sup>, Artur H. Świergiel<sup>1</sup>

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**Poster session P2. Calcium**

**P2.1**

**TETRABROMOBISPHENOL A DIRECTLY INTERFERES WITH ACTIVITY OF NMDA RECEPTORS IN CULTURED NEURONS AND ISOLATED CORTICAL MEMBRANES**

**Dominik Diamandakis**, Elżbieta Ziemińska, Elżbieta Salińska, Jerzy W. Łazarewicz

*Department of Neurochemistry, Mossakowski Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland*

## **P2.2**

### **TETRABROMOBISPHENOL A -INDUCED OXIDATIVE STRESS IN PRIMARY CULTURES OF RAT CEREBELLAR GRANULE CELLS: TRIGGERING ROLE OF CA<sup>2+</sup> IMBALANCE**

**Elżbieta Ziemińska, Jacek Lenart, Jerzy W. Łazarewicz**

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## **P2.3**

### **SENSITIVITY OF STORE-OPERATED CALCIUM ENTRY TO ANTAGONISTS OF IONOTROPIC RECEPTORS**

**Joanna Gruszczynska-Biegała<sup>1</sup>, Maria Śladowska<sup>1,2</sup>, Jacek Kuźnicki<sup>1</sup>**

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## **P2.4**

### **TRP CHANNELS PARTICIPATE IN MEMORY FORMATION IN PASSIVE AVOIDANCE TASK IN ONE-DAY OLD CHICKS**

**Elżbieta Salińska, Aleksandra Stafiej, Marta Słomka**

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## **P2.5**

### **ROLE OF HUNTINGTIN-ASSOCIATED PROTEIN 1 IN THE REGULATION OF SOCE IN MEDIUM SPINY NEURONS FROM TRANSGENIC YAC128 MICE, A MODEL OF HUNTINGTON'S DISEASE**

**Magdalena Czeredys<sup>1</sup>, Filip Maciąg<sup>1,2</sup>, Vladimir Vigont<sup>3</sup>, Elena Kaznacheyeva<sup>3</sup>, Axel Methner<sup>4</sup>, Jacek Kuźnicki<sup>1</sup>**

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## **P2.6**

### **THE EFFECT OF TETRAHYDROCARBAZOLES ON THE ER CALCIUM RELEASE AND SOCE IN MEDIUM SPINY NEURONS FROM TRANSGENIC YAC128 MICE, A MODEL OF HUNTINGTON'S DISEASE**

**Filip Maciąg<sup>1,2</sup>, Magdalena Czeredys<sup>2</sup>, Jacek Kuźnicki<sup>2</sup>**

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## **P2.7**

### **STIM1, STIM2 AND ORAI1 – OVEREXPRESSION OF KEY STORE OPERATED CALCIUM ENTRY IN TRANSGENIC MICE BRAIN**

**Łukasz Majewski<sup>1</sup>, Grzegorz Wiera<sup>2</sup>, Tomasz Wójtowicz<sup>2</sup>, Paweł M. Boguszewski<sup>3</sup>, Jerzy Mozrzyński<sup>2</sup>, Jacek Kuźnicki<sup>1</sup>**

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University, Wrocław, Poland; <sup>3</sup>Laboratory of Limbic System, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland

## **P2.8**

### **REGULATION OF NECTIN-3 PROCESSING IN THE HIPPOCAMPUS MEDIATED BY MMP-9 UNDER THE CHRONIC STRESS CONDITIONS**

**Emilia Rejmak-Kozicka, Katarzyna Kalita, Leszek Kaczmarek**

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## **Poster session P3. Neurotransmitter receptors and signaling pathways**

### **P3.1**

#### **$\alpha_2$ -ADRENERGIC MEDIATION OF MEMBRANE POTENTIAL CHANGES IN MEDIAL PREFRONTAL CORTEX (MPFC) PYRAMIDAL NEURONS IN YOUNG RATS**

**Katarzyna Grzelka, Paweł Szulczyk**

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### **P3.2**

#### **GABAERGIC TRANSMISSION IN THE RAT DORSAL RAPHE NUCLEUS IS MODULATED BY THE 5-HT<sub>7</sub> RECEPTOR**

**Joanna Sowa<sup>1</sup>, Magdalena Kusek<sup>1</sup>, Katarzyna Kamińska<sup>2</sup>, Krystyna Gołembowska<sup>2</sup>, Krzysztof Tokarski<sup>1</sup>, Grzegorz Hess<sup>1</sup>**

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### **P3.3**

#### **SUBDIAPHRAGMATIC VAGOTOMY PREVENTS RESTRAINT STRESS-INDUCED ALTERATIONS IN GLUTAMATERGIC TRANSMISSION AND LTP IN THE RAT FRONTAL CORTEX**

**Bartosz Bobula<sup>1</sup>, Paulina Rachwalska<sup>1</sup>, Grzegorz Hess<sup>1,2</sup>**

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### **P3.4**

#### **PROLONGED INCUBATION WITH DESIPRAMINE DIFFERENTIALLY MODULATE $\alpha$ 1A- AND $\alpha$ 1B-ADRENORECEPTOR SIGNALING IN PC12 CELLS**

**Piotr Chmielarz, Marta Kowalska, Katarzyna Rafa-Zabłocka, Irena Nalepa**

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**P3.5**

**STUDY OF CHEMICAL CODING OF THE CSMG NEURONS SUPPLYING PREPYLORIC REGION OF THE PORCINE STOMACH FOLLOWING ACETYLSALICYLIC ACID SUPPLEMENTATION AND AFTER PARTIAL STOMACH RESECTION**

**Jarosław Calka, Katarzyna Palus**

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**P3.6**

**GLUTAMATERGIC AND GABAERGIC TRANSMISSION IN RAT PVN IS ALTERED AFTER ACUTE RESTRAINT STRESS**

**Magdalena Kusek<sup>1</sup>, Anna Tokarska<sup>2</sup>, Krzysztof Tokarski<sup>1</sup>, Grzegorz Hess<sup>1,2</sup>**

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**P3.7**

**THE ROLE OF TTYH1 PROTEIN IN REGULATION OF DENDRITIC TREE AND SPINE FORMATION**

**Małgorzata Górniak-Walas, Aleksandra Kaliszewska, Katarzyna Łukasiuk**

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**P3.8**

**DIFFERENT PHARMACOLOGICAL PROFILE IN ALPHA1-GAMMA<sub>2</sub> AND ALPHA1-BETA<sub>2</sub>-GAMMA<sub>2</sub> GABA(A) RECEPTORS**

**Marek Brodzki<sup>1,2</sup>, Marta M. Czyżewska<sup>2</sup>, Radosław Rutkowski<sup>2</sup>, Magdalena Kisiel<sup>2</sup>, Magdalena Jatczak<sup>1,2</sup>, Jerzy W. Mozrzyński<sup>1,2</sup>**

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**P3.9**

**PROLONGED ELEVATION OF CORTICOSTERONE LEVEL ENHANCES SPONTANEOUS GLUTAMATE RELEASE IN THE RAT MOTOR CORTEX**

**Anna Czerw<sup>1</sup>, Joanna Kula<sup>1</sup>, Grzegorz Tylko<sup>1</sup>, Anna Błasiak<sup>1</sup>, Grzegorz Hess<sup>1,2</sup>**

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**P3.10**

**POSSIBLE NEURAL COMPENSATORY MECHANISMS FOR THE COMMUNICATION BETWEEN THE NERVOUS AND IMMUNE SYSTEMS AFTER CYCLOOXYGENASE INHIBITION**

**Anna Kobrzycka<sup>1</sup>, Marek Wieczorek<sup>1</sup>, Joanna Zubel<sup>2</sup>, Ewa Oclon<sup>2</sup>, Magdalena Hubner<sup>1</sup>**

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### **P3.11**

#### **SUBDIAPHRAGMATIC VAGOTOMY DOES NOT PROTECT AGAINST THE INCREASE OF NORADRENERGIC RESPONSE OF THE RAT**

**Marek Wieczorek<sup>1</sup>, Anna Kobrzycka<sup>1</sup>, Magdalena Hubner<sup>1</sup>, Ewa Oclon<sup>2</sup>, Joanna Zubeł<sup>2</sup>, Artur Świergiel<sup>3</sup>**

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### **P3.12**

#### **PHOENIXIN IS PRESENT IN HYPOTHALAMIC NEUROENDOCRINE NUCLEI OF THE DOMESTIC PIG – IMMUNOHISTOCHEMICAL STUDY**

**Beata Hermanowicz<sup>1</sup>, Krystyna Bogus-Nowakowska<sup>1</sup>, Artur Palasz<sup>2</sup>, Ryszard Wiaderkiewicz<sup>2</sup>, Anna Robak<sup>1</sup>**

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### **P3.13**

#### **DISTRIBUTION AND IMMUNOHISTOCHEMICAL CHARACTERISTICS OF CEREBELLAR PROJECTING NEURONS IN THE LOCUS COERULEUS COMPLEX OF THE RABBIT**

**Dorota Bukowska<sup>1</sup>, Leszek Zguczyński<sup>2</sup>, Barbara Mierzejewska-Krzyżowska<sup>2</sup>, Waldemar Sienkiewicz<sup>3</sup>, Jerzy Kaleczyc<sup>3</sup>**

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### **P3.14**

#### **THE EFFECTS OF DOPAMINE D1 AND D2 RECEPTOR AGONISTS, GIVEN ALONE OR JOINTLY WITH A NITRIC OXIDE DONOR, ON EXPRESSION OF PROTEINS INVOLVED IN THE NITRERGIC SIGNALING AND ON CGMP PRODUCTION IN 6-OHDA-LESIONED RATS**

**Elżbieta Lorenc-Koci**

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### **P3.15**

#### **ROLE OF SERUM RESPONSE FACTOR IN HOMEOSTATIC PLASTICITY**

**Anna Krysiak, Anna Suska, Leszek Kaczmarek, Katarzyna Kalita**

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### **P3.16**

#### **SENSITIZATION TO MORPHINE WITHDRAWAL SIGNS – A NEUROCHEMICAL BASIS IN DOPAMINERGIC RECEPTORS**

**Joanna Listos<sup>1</sup>, Agnieszka Wąsik<sup>2</sup>, Irena Bosiacka<sup>3</sup>, Sylwia Talarek<sup>1</sup>, Jolanta Orzelska<sup>1</sup>, Małgorzata Łupina<sup>1</sup>, Lucyna Antkiewicz-Michaluk<sup>2</sup>, Sylwia Fidecka<sup>1</sup>**

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### **P3.17**

#### **EXPRESSION AND FUNCTION OF ANGIOMOTIN FAMILY PROTEINS IN THE BRAIN**

**Tomasz Prószyński<sup>1</sup>, Katarzyna Rojek<sup>1</sup>, Paweł Niewiadomski<sup>1</sup>, Krzysztof Bernadziński<sup>1</sup>, Hubert Doleżyczek<sup>2</sup>, Marcin Rylski<sup>3</sup>, Leszek Kaczmarek<sup>2</sup>, Jacek Jaworski<sup>4</sup>**

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### **P3.18**

#### **EFFECTS OF BODY TEMPERATURE AND HYPERFERREMIA ON GLUTATHIONE AND VITAMIN E LEVELS IN THE BRAIN OF ASPHYXIATED NEONATAL RAT**

**Justyna Rogalska<sup>1</sup>, Hanna Kletkiewicz<sup>1</sup>, Anna Nowakowska<sup>1</sup>, Alina Woźniak<sup>2</sup>, Celestyna Mila-Kierzenkowska<sup>2</sup>**

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### **P3.19**

#### **GABAA RECEPTOR BINDING SITE RESIDUE BETA2 GLUTAMATE155: POSSIBLE ROLE IN CHANNEL PREAMPLIFICATION**

**Magdalena Kisiel<sup>1</sup>, Magdalena Jatczak<sup>1,2</sup>, Marta M. Czyżewska<sup>1</sup>, Marek Brodzki<sup>1,2</sup>, Cynthia Czajkowski<sup>3</sup>, Jerzy W. Mozrzymas<sup>1,2</sup>**

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### **P3.20**

#### **BRAINSLICES – IMAGE SHARING FOR NEUROSCIENCE**

**Jakub Kowalski, Piotr Majka, Alicja Puścian, Daniel Wójcik**

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## Poster session P4. Cholinergic system

### P4.1

#### THETA RHYTHM AND LOCAL CELL DISCHARGES RECORDED IN POSTERIOR HYPOTHALAMIC SLICES OF THE ADULT RAT

**Bartosz Caban**, Paulina Klos-Wojtczak, Tomasz Kowalczyk, Renata Bocian, Paulina Kaźmierska, Jan Konopacki

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### P4.2

#### POSTERIOR HYPOTHALAMIC THETA RHYTHM AND LOCAL CELL DISCHARGES IN ADULT ANESTHETIZED RATS

**Renata Bocian**, Paulina Klos-Wojtczak, Bartosz Caban, Tomasz Kowalczyk, Paulina Kaźmierska, Jan Konopacki

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### P4.3

#### ENERGY METABOLISM IN NEURONS EXPOSED TO HYPOXIA-INDUCING CHEMICALS

**Beata Gapys**, Marlena Zyśk, Anna Ronowska, Hanna Bielarczyk

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### P4.4

#### CYTOTOXIC EFFECTS OF ZINC ON CHOLINERGIC SN56 NEUROBLASTOMA AND C6 ASTROCYTOMA CELLS

**Aleksandra Dyś**, Anna Ronowska, Sylwia Gul-Hinc, Joanna Klimaszewska-Łata, Dorota Bizon-Zygmańska, Andrzej Szutowicz, Hanna Bielarczyk

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### P4.5

#### CARBACHOL-INDUCED PRESYNAPTIC MODULATION OF TRANSMISSION FROM CORTICAL LAYER 6 TO POSTEROMEDIAL THALAMIC NUCLEUS

**Syune Nersisyan**<sup>1</sup>, Marek Bekisz<sup>1</sup>, Ewa Kublik<sup>1</sup>, Bjorn Granseth<sup>2</sup>, Andrzej Wróbel<sup>1</sup>

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### P4.6

#### MUSCARINIC RECEPTOR REGULATION OF PYRAMIDAL NEURON MEMBRANE POTENTIAL IN THE MEDIAL PREFRONTAL CORTEX (MPFC)

**Przemysław Norbert Kurowski**, Maciej Gawlak, Paweł Szulczyk

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**P4.7**

**ACTIVATION OF ALPHA7 NICOTINIC ACETYLCHOLINE RECEPTORS AGAINST COGNITIVE AND SENSORIMOTOR GATING DEFICITS IN ANIMAL MODEL OF SCHIZOPHRENIA**

**Agnieszka Potasiewicz, Agnieszka Nikiforuk, Małgorzata Holuj, Piotr Popik**

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**P4.8**

**TIMING CELLS AND CARBACHOL INDUCED THETA RHYTHM IN POSTERIOR HYPOTHALAMIC SLICE PREPARATIONS OF ADULT RATS**

**Renata Bocian, Bartosz Caban, Tomasz Kowalczyk, Paulina Klos-Wojtczak, Paulina Kaźmierska, Jan Konopacki**

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**P4.9**

**VOLTAGE-GATED CALCIUM CHANNELS AFFECTED ACETYL-CoA METABOLISM IN CHOLINERGIC NEURONS EXPOSED ON Z<sub>N</sub> IONS**

**Marlena Zyśk, Beata Gapys, Sylwia Gul - Hinc, Andrzej Szutowicz, Hanna Bielarczyk**

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