# 2nd CENTRAL EUROPEAN BIOMEDICAL CONGRESS Kraków, 15-18 June, 2016

## CEBC program

WEDNESDAY, 15 June 2016

Venue: Manggha Museum of Japanese Art and Technology Europe - Far East Gallery

Time	Event
18.00-19.00	Registration
19.00	Welcome addresses
	Chairs: CEBC Organizers
19.30-20.15	Inaugural lecture (PL. 1, Plenary lecture 1)
	Chair: Joanna Pera (Poland)
	Personalized therapies for CNS diseases: needs and approaches
	Kaplana M. Merchant (Indiana University-Purdue University, USA)
20.30-21.00	Music performance by Marcin Wyrostek
21.00-22.30	Welcome reception

## THURSDAY, 16 June 2016

**Venue: Auditorium Maximum** 

Time	Event
8.45-10.45	Session 1 (Medium Hall A):
	Looking for new targets for medicinal chemistry-academic perspective
	Chairs: Kenneth A. Jacobson (USA) & Katarzyna Kieć-Kononowicz (Poland
	S.01-1 Kenneth A. Jacobson (NIDDK, NIH, USA)
	G Protein-coupled receptors (GPCRs) for nucleosides and nucleotides: Structure-based ligand design and therapeutic potential
	S.01-2 Christa E. Müller (University of Bonn, Germany)
	A2A and A2B: closely related adenosine receptor subtypes with striking differences
	S.01-3 Marcin Drag (Wroclaw University of Technology, Wroclaw, Poland)
	Design of specific chemical tools for investigation of proteolytic enzymes using unnatural amino acids
	Session 2 (Medium Hall B):
	From lipids to serotonin: Advancing toward novel therapeutics for addictive disorders
	Chairs: Kathryn A. Cunningham (USA) & Małgorzata Frankowska (Poland)
	S.02-1 Christian P. Muller (University Clinic, Friedrich-Alexander-University Erlangen-Nuremberg, Germany)
	Sphingolipids and the transition from depression to alcoholism
	S.02-2 Kathryn A. Cunningham (University of Texas Medical Branch, Galveston, USA)
	Integrating serotoninergic strategies into therapeutics for cocaine use disorder
	S.02-3 Umberto Spampinato (Inserm, Université de Bordeaux, France)
	Impact of serotonin2 receptor subtypes on cocaine-induced dopamine release in the medial prefrontal cortex: implications in the
	control of cocaine behavioral responses
	S.02-4 Magdalena Zaniewska (Institute of Pharmacology PAS, Krakow, Poland)
	Defining the mechanism regulating the role of serotonin in the development of ethanol addiction in animals
	Session 3 (Small Hall):
	Nanomedicine
	Chairs: Vladimir P. Torchilin (USA) & Piotr Warszyński (Poland)
	S.03-1 Vladimir P. Torchilin (Northeastern University, USA)

Advances in nanosystems for drug delivery S.03-2 Krzysztof Szczepanowicz (Jerzy Haber Institute of Catalysis and Surface Chemistry, PAS, Krakow, Poland) Synthesis and properties of polyelectrolyte-coated nanocapsules S.03-3 Ewa Błasiak (Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Krakow, Poland) Biocompatible polymeric nanoparticles as promising candidates for drug delivery **S.03-4 Danuta Jantas** (Institute of Pharmacology PAS, Krakow, Poland) Neuroprotective activity of (bio)polyelectrolyte-coated nanocapsules containing curcumin S.03-5 Joanna Ślusarczyk (Institute of Pharmacology PAS, Krakow, Poland) Evaluation of protective action of polydatin, free form and in nanocapsules, in the hippocampal organotypic cultures treated with lipopolysaccharide Session 4 (Seminar Room): **Young Scientist Presentation (Ph.D. students)** Chairs: Joanna Pera (Poland) & Jan Rodriguez (Poland) S.04-1 Katarzyna Kamińska (Institute of Pharmacology PAS, Krakow, Poland) The effect of co-treatment with risperidone and escitalopram on dopamine and serotonin level in the rat frontal cortex **S.04-2 Joanna Jastrzębska** (Institute of Pharmacology PAS, Krakow, Poland) Modeling co-existence of depression and cocaine addiction in rats: the effects of N-acetylcysteine-amide (AD4) on cocaine reward, extinction and seeking behaviorin bulbectomized rats **S.04-3 Paweł Konieczny** (Jagiellonian University Medical College, Krakow, Poland) The role of AMP-activated kinase (AMPK) in epithelial-mesenchymal transition (EMT) **S.04-4 Bogna Badyra** (Jagiellonian University Medical College, Krakow, Poland) Characterization of bone marrow-derived mesenchymal stem cells obtained from children diagnosed with hypoxic-ischemic encephalopathy S.04-5 Sabina Lichołai (Jagiellonian University, Krakow, Poland) Serum miR-29c as a potential biomarker for abdominal aortic aneurysm **S.04-6 Beata Sienkiewicz** (Wrocław Medical University, Poland) Hepatotoxicity of posaconazole oral formulation in relation to ABCB1 polymorphism among children with haematological malignances **S.04-7 Marta Napierała** (University of Medical Sciences, Poznań, Poland) The impact of prenatal tobacco exposure on the cerebral mass of the neonate 10.45-11.15 Coffee break 11.15-12.00 (PL. 2) Plenary lecture 2 (Medium Hall): Chair: Marek Sanak (Poland)

	Hereditary breast and ovarian cancers
	Jan Lubiński (Pomeranian Medical University , Szczecin, Poland)
12.00-13.30	Lunch break
13.00-14.30	Poster session I (Exhibition Room)
14.30-15.15	(PL. 3) Plenary lecture 3 (Medium Hall):
	Chair: Władysław Lasoń, Poland
	Personalizing treatment of the schizophrenia spectrum through endophenotypes, rational pharmacology, and pharmacogenomics  Herbert Y. Meltzer (Northwestern University, Chicago, USA)
15.15-15.35	(SP.1) Sponsor presentation (Medium Hall)
	Clinical and prophylactic whole genome sequencing as the most important step towards personalised medicine
	Anna Boguszewska – Chachulska (Genomed, Poland)
15.35-16.00	Coffee break
16.00-18.00	Session 5 (Medium Hall A):
	Neuroimmunological aspect of pain
	Chair: Joanna Mika (Poland)
	S.05-1 cancelled
	S.05-2 Katarzyna Starowicz (Institute of Pharmacology PAS, Krakow, Poland)
	Molecular basis of OA to guide the identification of new therapeutic targets
	S.05-3 Michaela Kress (Medical University of Innsbruck, Austria)
	Interleukin-6 and signal transducer gp130 as important regulators of neuroimmune interactions in the pain pathway
	S.05-4 Joanna Mika (Institute of Pharmacology PAS, Krakow, Poland)
	Pharmacological modulation of intracellular signaling pathways in microglia can attenuate neuropathic pain symptoms and enhance
	opioid effectiveness
	Session 6 (Medium Hall B):
	Novel mechanisms and mediators in allergic inflammation
	Chair: Marek Sanak (Poland)
	S.06-1 Joshua Boyce (Harvard Medical School, USA)
	Molecular pathophysiology of aspirin exacerbated respiratory disease
	S.06-2 Masami Taniguchi (Sagamihara National Hospital, Japan)

Eicosanoid imbalance in aspirin exacerbated respiratory disease

S.06-3 Hae-Sim Park (Ajou University School of Medicine, South Korea)

Leukotriene overproduction and platelet activation in AERD

**S.06-4 Krzysztof Kowal** (Medical University of Bialystok, Poland)

Concentration of selected eicosanoids in exhaled breath condensate during allergen-induced early asthmatic response

Session 7 (Small Hall):

Personalized medicine

Chairs: Zbigniew Gaciong (Poland) & Tomasz Grodzicki (Poland)

**S.07-1 Zbigniew Gaciong** (Medical University of Warsaw, Poland)

Personalized or precision medicine?

S.07-2 Anna Wójcicka & Krystin Jażdżewski (Medical University of Warsaw, Poland)

Genome studies and the risk of cancer

**S.07-3 Karol Kamiński** (Medical University of Bialystok, Poland)

One treatment for all? A case of cardiovascular patient

Session 8 (Seminar Room):

Society of Neurotoxicity - Processes and Mechanisms Associated with Parkinson's Disease

Chairs: Richard M. Kostrzewa (USA) & Elaine Del Bel Guimaraes (Brasil)

**S.08-1 Rita Raisman-Vozari** (INSERM, Brain and Spine Institute, Paris, France)

Role of antibiotics on neuroprotection and neuroinflammation

S.08-2 María-Trinidad Herrero Ezquerro (School of Medicine, University of Murcia, Murcia, Spain)

Matrix metalloproteinases and neurodegenerative progression in Parkinsonism

S.08-3 Richard M. Kostrzewa (East Tennessee State University, Johnson City, USA)

L-DOPA effect on hydroxyl radical in a Parkinsonian rat

S.08-4 Elaine Del Bel Guimaraes (University of Sao Paulo, Brasil)

NO and glutamate interaction in treatment of L-DOPA-induced dyskinesia

19.30

Gala Dinner

**FRIDAY, 17 June 2016** 

**Venue: Auditorium Maximum** 

Time	Event
8.45-10.45	Session 9 (Seminar Room):
	S.09 Workshop for Polish young scientists - National Science Centre, Poland
	Chairs: Marcin Liana (Poland) & Magdalena Kowalczyk (Poland)
	Tips for writing a successful grant proposal
	Session 10 (Medium Hall A):
	Diabetes
	Chair: Maciej Małecki ( Poland)
	S.10-1 Benjamin Glaser (Hadassah-Hebrew University Medical Center, Israel)
	Non-invasive detection of cell death in diabetes and other pathologists
	S.10-2 Maciej Małecki (Jagiellonian University Medical College, Krakow, Poland)
	The deadly duo of obesity and type 2 diabetes - can new drugs treat both?
	S.10-3 Leszek Czupryniak (Medical University of Warsaw, Poland)
	Vascular complications of diabetes – completely avoidable at last?
	S.10-4 Irina Kowalska (Medical University of Białystok, Poland)
	Insulin resistance - does it play a role in pathogenesis of chronic complications and treatment of diabetes?
	Session 11 (Medium Hall B):
	Neurodegenerative diseases
	Chair: Jacek Kuźnicki ( Poland)
	S.11-1 Axel Methner (University Medical Center Mainz, Mainz, Germany)
	Analysis and recovery of neuronal microcircuit activity in Huntington's disease using two-photon microscopy and optogenetics
	S.11-2 Urszula Fiszer (Medical Centre of Postgraduate Training, Warsaw, Poland)
	Biomarkers in Parkinson's disease
	S.11-3 Piotr Lewczuk (Universitätsklinikum Erlangen & Friedrich-Alexander Universität Erlangen-Nürnberg, Germany)
	CSF biomarkers of Alzheimer's disease
	S.11-4 Urszula Wojda (Nencki Institute of Experimental Biology, Warsaw, Poland) & Jacek Kuźnicki (International Institute of
	Molecular and Cell Biology, Warsaw, Poland)
	Blood biomarkers of Alzheimer's disease
	Session 12 (Small Hall):
	Young Scientist Presentation (Ph.D. students)

	Chair: Christa E. Müller (Germany)
	S.12-1 Stefan Mordalski (Institute of Pharmacology PAS, Krakow, Poland)
	Molecular mechanism of activity of non-basic ligands of 5-HT <sub>6</sub> receptors
	S.12-2 Agnieszka Olejarz (Jagiellonian University Medical College, Krakow, Poland)
	Monoamine oxidase B activity of novel xanthine derivatives
	S.12-3 Dawid Warszycki (Institute of Pharmacology PAS, Krakow, Poland)
	Pharmacophore modeling of UDP-N-acetylmuramoylalanine glutamate ligase inhibitors – methodology and application for virtual screening procedure
	S.12-4 Joanna Laskowska (Nicolaus Copernicus University, Toruń, Poland)
	Genomic and transcriptomic determinants of resistance in anthracycline therapy in pediatric acute leukemias
	S.12-5 Sonia Trojan (Jagiellonian University Medical College, Krakow, Poland)
	Methylation of CD146 (MCAM) gene promoter as a cause of CD146 silencing level in breast cancer cell lines
	S.12-6 Katarzyna Ciaćma (Jagiellonian University Medical College, Krakow, Poland)
	TRAIL-producing Lactococcus lactis bacteria as a vehicle for induction of colorectal cancer cell apoptosis
	S.12-7 Ana Semeano (Universidade de São Paulo, São Paulo, Brazil)
	The impact of magnetic field on ion influx of the neuronal cells
	S.12-8 Magda Zychowska (Institute of Pharmacology PAS, Krakow, Poland)
	The influence of BoNT/A administration on IL-1 family members in rat neuropathic pain model – in vivo and in vitro evidences
10.45-11.15	Coffee break
11.15-12.00	(PL. 4) Plenary lecture 4 (Medium Hall):
	Chair: Krzysztof Wędzony (Poland)
	Structural insights into G protein coupled receptor activation
	Brian S. Kobilka - Nobel Prize laureate 2012 (Stanford University , USA)
12.00-13.30	Lunch break
13.00-14.30	Poster session II (Exhibition Room)
14.30-15.15	(PL. 5) Plenary lecture 5 (Medium Hall):
	Chair: Irena Nalepa (Poland)
	How novel should the new drug targets be? Industry perspective
	Anton Bespalov (Partnership for Assessment and Accreditation of Scientific Practice, Germany)
15.15-15.30	(SP.2) Sponsor presentation (Medium Hall)

	Precision molecular profiling of cancer using droplet Digital™ PCR
	Eddy van Colleburg (Bio-Rad, Poland)
15.30-16.00	Coffee break
16.00-18.00	Session 13 (Medium Hall A):
1	Learning the emotions with the help of the amygdala
	Chairs: Ewelina Knapska (Poland) & Leszek Kaczmarek (Poland)
	S.13-1 Leszek Kaczmarek (Nencki Institute of Experimental Biology PAS, Warsaw, Poland)
	MMP-9, extracellular protease – a culprit of aberrant synaptic plasticity
	S.13-2 Norbert Hajos (Institute of Experimental Medicine, Hungarian Academy of Sciences, Hungary)
	Functional organization of perisomatic inhibition in the basolateral amygdala
	S.13-3 Ewelina Knapska (Nencki Institute of Experimental Biology PAS, Warsaw, Poland)
	Neuronal circuits in the central amygdala underlying socially transferred fear
	S.13-4 Cyril Herry & Cyril Dejean (INSERM, Neurocentre Magendie & University of Bordeaux, France)
	Neuronal circuits and mechanisms of fear behaviour
	Session 14 (Medium Hall B):
	Cerebrovascular diseases
	Chairs: Jerzy Krupinski (Spain) & Agnieszka Słowik (Poland)
	<b>S.14-1 Jerzy Krupiński</b> (Healthcare Science Research Institute, Manchester Metropolitan University & Hospital Universitari Mútua de Terrassa, Spain)
	Circulating miRNAs as future biomarkers for a cerebrovascular immune-inflammatory atherosclerotic diseases
	S.14-2 Agnieszka Słowik (Jagiellonian University Medical College, Krakow, Poland)
	Contemporary approach to acute stroke treatment
	S.14-3 Joanna Pera (Jagiellonian University Medical College, Krakow, Poland )
	Patients stratification in stroke management
	S.14-4 Adam Dénes (Institute of Experimental Medicine, Hungarian Academy of Sciences, Hungary)
	Central and systemic inflammatory mechanisms in cerebral ischemia
	Session 15 (Seminar Room):
	Environmental conditions and neuropsychiatric disorders
	Chairs: Anni-Maija Linden (Finland) & Marzena Maćkowiak (Poland)
	S.15-1 Juan Nacher (Universitat de Valencia, Spain)

Interneuronal plasticity and psychiatric disorders S.15-2 Agnieszka Chocyk (Institute of Pharmacology PAS, Krakow, Poland) Early-life stress and dysfunction of the medial prefrontal cortex as risk factors for mental disorders S.15-3 Anni-Maija Linden (University of Helsinki, Finland) Neuroinflammation in alcohol addiction **S.15-4 Marzena Maćkowiak** (Institute of Pharmacology PAS, Krakow, Poland) Enriched environment and development of schizophrenia-like abnormalities Session 16 (Small Room): Structure-based drug design Chair: Andrzej Bojarski (Poland) S.16-1 David E. Gloriam ( Department of Drug Design and Pharmacology, University of Copenhagen, Denmark) Identification of endogenous and surrogate ligands for orphan GPCRs S.16-2 Sławomir Filipek (Biological and Chemical Research Centre, University of Warsaw, Poland) Differences of agonist and antagonist binding to GPCRs S.16-3 György M. Keserű (Research Centre for Natural Sciences, Hungarian Academy of Sciences, Hungary) Exploiting secondary binding pockets in aminergic GPCRs S.16-4 Peter Kolb (Department of Pharmaceutical Chemistry, Philipps-Universität Marburg, Germany) In silico exploration of chemical and GPCR ligand space 19.30 **Congress Dinner** 

# SATURDAY, 18 June 2016

**Venue: Auditorium Maximum** 

Time	Event
9.00-9.45	(PL. 6) Plenary lecture 6 (Medium Hall):
	Chair: Edmund Przegaliński (Poland)
	Heteroreceptor complexes and their allosteric receptor-receptor interactions as a novel biological principle for integration of
	communication in the CNS: targets for drug development in mental and neurological disorders
	Kjell Fuxe (Karolinska Institutet, Sweden)
9.45-10.15	Coffee break
10.15-12.15	Session 17 (Small Hall):
	Chair: Małgorzata Filip (Poland)
	Property-based drug design (pharmaceutical companies' point of view)
	S.17-1 Udo Lange(AbbVie Deutschland GmbH & Co. KG, Ludwigshafen, Germany)
	Competitive GlyT1 Inhibitors
	S.17-2 Charles Henry Fabritius (Selvita S.A., Poland)
	Analysis of Selvita's library: generation of high quality hit compounds for our early discovery programs
	S.17-3 Aleksandra Stańczak (CelonPharma, Poland)
	Knowledge-based design of a novel selective pan-FGFR kinase inhibitor - CELONKO project
	Session 18 (Medium Hall A):
	Recent advances in the clinical applications of stem cells
	Chairs: Yang D. Teng (USA) & Marcin Majka (Poland)
	S.18-1 Henning Ulrich (University of São Paulo, Brazil)
	Oscillations of intracellular calcium concentration and neural transcription factor expression coding for neural fate determination of
	embryonic stem cells
	S.18-2 Yang D. Teng (Harvard Medical School & Veterans Affairs Boston Healthcare System, USA)
	Scaffolding for hMSC delivery: Defining recovery neurobiology of injured spinal cord
	S.18-3 Boguslaw Machaliński (Pomeranian Medical University, Szczecin, Poland)
	Neuroprotective activity of hematopoietic stem/progenitor cells

S.18-4 Piotr Musiałek (Jagiellonian University Medical College & John Paul II Hospital, Krakow, Poland)

Progenitor cell imaging in cardiovascular regeneration: A need or a fancy?

Session 19 (Medium Hall B):

Chairs: Vincenzo Cestari (Italy) & Irena Nalepa (Poland)

#### Potential therapeutic targets suggested by animal models of brain diseases

S.19-1 Vincenzo Cestari (Cell Biology and Neurobiology Institute & Sapienza University, Italy)

Aversive memory and its modulation in an animal model of stressor-related disorder

S.19-2 Agnieszka Zelek-Molik (Institute of Pharmacology PAS, Krakow, Poland)

Molecular adaptations of signaling pathways in animal models of addiction

**S.19-3 Grzegorz Kreiner** (Institute of Pharmacology PAS, Krakow, Poland)

Compensatory mechanisms as possible targets of pharmacotherapy in neurodegenerative diseases - study on transgenic models

S.19-4 Piotr Chmielarz (Institute of Biotechnology, University of Helsinki, Finland)

MicroRNAs biogenesis in Parkinson's disease - targeting DICER activity in dopamine neurons

**S.19-5 Mikko Airaavara** (Institute of Biotechnology, University of Helsinki, Finland)

CDNF/MANF-family of neurotrophic factors: biology and therapeutic potential

Session 20 (Seminar Room):

Chairs: Marzena Maćkowiak (Poland) & Umberto Spampinato (France)

### Young Scientist Presentation (Ph.D. fellows)

S.20-1 Artur Wnorowski (Medical University of Lublin, Poland)

 $R, R'-4'-methoxy-1-naphthyl fenoterol\ acts\ as\ bitopic,\ GPR55+62-adrenergic\ receptor,\ ligand\ in\ various\ tumor\ cell\ lines$ 

S.20-2 Ewa Żurawska-Płaksej (Wrocław Medical University, Poland)

The alterations in blood plasma chitotriosidase immunoblotting pattern and O-glycans expression are associated with type 2 diabetes?

S.20-3 Marta Rusek (Medical University of Lublin, Poland)

The impact of incretin-based drugs on some non-traditional risk factors for cardiovascular disease (CVD) in rats with fructose-induced metabolic syndrome

S.20-4 Marta Rysz (Institute of Pharmacology PAS, Krakow, Poland)

Brain serotonin regulates the expression of cytochrome liver P450 via neuroendocrine pathways involving the paraventricular and arcuate nuclei of the hypothalamus

**S.20-5 Aneta Stachowicz** (Jagiellonian University Medical College, Krakow, Poland)

Proteomic analysis of mitochondria isolated from the frontal cortex and hippocampus of apolipoprotein E knockout mice treated with

	Alda-1, an activator of mitochondrial aldehyde dehydrogenase (ALDH2)
	S.20-6 Emilia Gąsińska (Medical University of Warsaw, Poland)
	Influence of dehydroepiandrosterone on pain threshold and monoamines concentration in STZ-induced neuropathic pain model
	S.20-7 Barbara Pijet (Institute of Experimental Biology PAS, Warsaw, Poland)
	MMP-9 activity: friend or enemy of traumatic brain injury?
	S.20-8 Katarzyna Głombik (Institute of Pharmacology PAS, Krakow, Poland)
	Imipramine attenuates mitochondrial disturbances in frontal cortex- study in animal model of depression
12.15-13.30	Lunch break
13.30-14.00	Closing and Award Ceremony (Medium Hall)